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## Address.

### THE MODERN CONCEPTION OF ECZEMA.

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON CUTANEOUS MEDICINE AND SURGERY AT THE FIFTY-FOURTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, AT NEW ORLEANS, MAY 5 TO 8, 1903.


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In comparing the views of modern dermatologists as to the types of inflammation of the skin which should be classed as eczemas, one is met with the most discordant opinions. Hebra undoubtedly accomplished a great service for dermatology in simplifying its nomenclature. His enormous clinical experience and power of observation enabled him to recognize that conditions which had before his time been called distinct diseases were in reality but different stages or phases of the same affection.

The modern tendency seems to be to break away from the extreme view of Hebra that all superficial catarrhal inflammations of the skin caused by irritants are eczemas. We are told that when the cause is known or apparent the inflammation is a dermatitis; when it can not be ascertained it is an eczema. If every one reacted in the same manner to irritants or if the effect always ceased with the removal of the cause the foregoing statements might appear less artificial. We know, however, that certain individuals are extremely susceptible to chemical, thermal or other irritants, while others show little or no reaction, even when they are applied in a more concentrated form or after prolonged exposure to them.

It is evident, therefore, that individual reaction, susceptibility or idiosyncrasy play an important rôle in the evolution of such inflammations.

Furthermore, a dermatitis from an external irritant may spread marginally, develop secondary patches or become generalized after the local irritant is removed. We can not, therefore, accept unreservedly the arbitrary definition that a dermatitis is the result of an external irritant, while an eczema is produced by some mysterious disturbance of metabolism.

It is often convenient, however, for purposes of instruction, to call an inflammation of the skin a dermatitis when its etiology is evident and it is sharply localized to the part where the irritant is applied. The more carefully we study our cases of superficial inflammation of the skin even when the cause is not at first apparent, the more convinced we become that the great majority of such cases are produced by the local action of some irritant which may be of chemical or microbic nature.

In either the so-called dermatitis, of which the cause is apparent, or in eczema, where we can not determine the etiologic factors, the clinical picture may be the same.

In both we have a superficial inflammation which is characterized by changes in the epidermis and papillary portion of the derma.

The intercellular edema, the parakeratosis, the vesicle-formation with resulting crusting and scaling, are common changes in both conditions. Why, then, should we employ such an artificial distinction as that used by many modern dermatologists, and say that here is a dermatitis because the involved skin has been subjected to a known irritant, and there an eczema because no local source of irritation can be found?

All the phenomena of inflammation can be experimentally produced by chemical or thermal agents under suitable conditions. The vascular dilatation, serous exudation, the migration of leucocytes with resulting changes in the epidermis and corium are found in a dermatitis from external irritants as well as in a so-called eczema of which the cause is not so evident.

If our clinical and pathologic pictures are the same, it would appear unscientific and unwise to insist on such artificial distinctions, except possibly as a clinical guide in the prophylaxis and treatment of such conditions. If we observe simply the objective features of a dermatitis without regard to its localization or its possible relationship to its bearer's occupation, it is difficult or impossible to say in what manner it differs from a so-called idiopathic inflammation of the skin.

A dermatitis excited by poison ivy may differ in no essential regard from an acute vesicular eczema of unknown origin.

We have all seen recurring vesicular inflammations of the skin in individuals who had at one time been the subjects of poisoning with this plant.

Are such eruptions due to the retention in the skin of the chemical poison of the rhus toxicodendron, to a new infection from the plant, or are they so-called idiopathic eczemas in a vulnerable patient?

In some cases we can with almost absolute certainty exclude a new infection from the plant, but the reaction of the skin in both cases may be exactly the same. It does not always, therefore, appear practicable to classify catarrhal inflammations of the skin from a strictly etiologic point of view. If we admit that catarrhal inflammations of the skin from local irritants differ in no essential feature from other catarrhal inflammations of the skin in which the etiology is not clear, we have a good reason for assuming that all such conditions may have a local cause; or at least we may

say that there is as good reason for supposing that they are all local as for the other assumption that some may be constitutional.

We can not deny the possibility that eczema may be caused by some internal condition such as an infection from the gastro-intestinal canal or some disturbance in metabolism. It is unfortunately not possible to prove or disprove such a proposition. The view which is so widely held that eczema is a manifestation of the uric acid diathesis is equally vague and unsatisfactory.

All such general conditions which have been invoked to explain the occurrence of eczema may act as contributing factors in preparing the skin for the direct action of a micro-organism or its toxic products. This view is a rational one in the light of our knowledge regarding the pathogenesis of catarrhal inflammations of the skin of which the cause is known. The vessels of the papillary region react to irritants in the epidermis by dilatation and the outpouring of serum and leucocytes. The serum with its contained leucocytes is attracted to the irritating substance producing the phenomena to which we give the name of dermatitis or eczema. If the cause be a chemical or non-microbic one the dermatitis may cease with its removal.

If primarily microbic or if an infection be superadded the eruption may spread marginally or infect outlying or distant areas of the skin. It does not seem wise, therefore, to attempt to differentiate too sharply the so-called external types of eczema from the ones of which the cause is not at first apparent, for they may have identical clinical and histological features.

The wider our clinical experiences the more liable are we to find deviations from the typical varieties of eczema. We not infrequently see inflammations spreading from the scalp to the ears, face and upper portions of the body where no antecedent seborrheic dermatitis of the scalp existed. The scalp in individuals of uncleanly habits affords an excellent habitat for micro-organisms which, under favorable conditions, excite a spreading dermatitis. All eczemas which originate in the scalp are therefore not necessarily of the seborrheic type described by Unna. On the other hand, seborrheic dermatitis may originate on parts of the body far removed from the scalp and apparently independent of this source of infection.

In a general way we may divide and subdivide inflammations of the skin according to their etiology, site, clinical forms, etc., but we are constantly meeting with cases which are atypical in all of these respects.

The less definite our experience and knowledge, the more inclined are we to overestimate the importance of general conditions and neglect the causes which are apparent.

It is easy to say that eczemas are produced or modified by gouty states, indigestion or some indefinite general disturbance, but the more closely we study our cases in the light of modern knowledge as to possible sources of infection the fewer cases are met with which can not be better explained by some local toxic or microbic irritant. The majority of modern dermatologists admit that parasitic eczemas are met with which can not be differentiated from those of unknown causation. It would not seem possible in all cases or even in the majority of our skin inflammations to say that we can differentiate either by clinical or histologic features those caused by external irritants from the rarer forms in which the etiologic factor is not evident.

Admitting as we must, that the real cause in most of such inflammations is a local one, we should not overlook the importance of general conditions as contributing influences.

Patients suffering with nephritis or glycosuria, as we all know, are easily infected with pyogenic or other organisms. Alterations in the body fluids or tissues in these conditions render them favorable culture media for micro-organisms, consequently we are more apt to meet with erysipelas, boils or carbuncles in such individuals than in healthy ones. For the same reason chronic gastro-intestinal toxemia, anemia or gouty states may render the individual more vulnerable to the agent or agents which excite eczema.

We might with almost as good reason attribute erysipelas, furunculosis or other local infections to nephritis and glycosuria as to say that eczema is only due to such general causes as imperfect metabolism, gout or other morbid conditions.

In other words, if we claim for eczema a cause that must have its seat in the skin, the tissues are prepared for its action by a lowering of their resisting power.

This may be brought about, as we know from a consideration of other infectious processes, by purely local changes, or by some alteration in the fluids of the body.

Following inflammation of the epidermis and papillary body there is a remarkable increase in the irritability of the skin, which manifests itself by itching and other paresthesias. If irritants are applied to such an inflamed surface the morbid processes may be heightened and new centers of infection arise.

The development of such outlying patches have been explained by reflex irritation of the vasomotor centers.

For this and other reasons the nervous system has been supposed to play an active rôle in the evolution of eczema, and all causes which weaken the neuro-vascular tone are believed to render the individual more vulnerable.

Kromayer[1] attributes such importance to the irritability of the skin that he defines eczema as an atypical inflammation which is both the result and cause of an abnormal excitability of this organ.

Crocker,[2] because of the symmetrical outbreak of the disease and the involvement of definite vasomotor areas, is inclined to the belief that the nervous system is concerned in certain of its manifestations.

The symmetry of an eruption is by no means positive proof of the influence of the nervous system or of the consfitutional origin of the malady. Scabies is a symmetrical affection, as are also certain eruptions from the local action of drugs or chemical irritants. A dermatitis excited by iodoform or arnica in a susceptible subject may rapidly spread and become symmetrical. It has been assumed in such cases that the outbreak on distant parts of the body is due to absorption and dissemination of the drug through the blood stream or through irritation of the vasomotor centers.

The latter hypothesis has been controverted by Csillag,[3] who has shown by experiments that when an irritant like arnica is limited to a certain spot its action is confined there. If a dermatitis appears on other parts of the body it is due to the accidental transference of the drug to that region.

The conclusions drawn from clinical observation are by no means free from errors, as witness the thousand and one causes which have been invoked to explain the affection in question, and which are largely the reflection of the views regarding pathologic problems prevalent at the time.

Eczemas follow or are associated with some general condition, therefore they are directly due to such a state;

they appear after a depressing mental emotion or shock, consequently the nervous system is concerned in their etiology. Such loose methods of reasoning lead us nowhere and serve only to confuse the problem. We have no experimental methods which can be employed to prove or deny such hypotheses, so that little progress is made by their elaboration.

Clearer ideas regarding the pathogenesis of eczema have been obtained by investigating the types of eruption which are now included in the eczema group. We have in this way gained a fairly well-defined clinical conception of seborrheic eczema and various forms of infectious dermatitis produced by staphylococcus and streptococcus inoculation.

In our search for a local cause in eczema we should by no means minimize the importance of all conditions, both general and local, which favor infection. In hospital and dispensary practice, where less attention is paid to cleanliness, infectious forms of dermatitis are more frequently met with. Among well-to-do patients metabolic disturbances may deserve more attention.

It is perhaps also well to bear in mind the manner in which different individuals react to irritants. After the ingestion of the iodids one person may develop an erythema or urticaria, another a pustular or bullous eruption, a third cutaneous or subcutaneous nodules. Rashes of similar or identical appearance may be called forth by a great variety of drugs.

Brocq,[4] from a consideration of these phenomena, has classified eruptions like urticaria, the erythemata, prurigo, lichen planus and vesicular eczema, as pure cutaneous reactions. His conception of such dermatoses is that they have no precise etiology but may be evoked by a variety of external or internal irritants.

The individual reaction or idiosyncrasy may, therefore, be added to the other general conditions which favor the development of an eruption or determine its type. It is impossible with our present knowledge to frame a single hypothesis which will explain in a satisfactory way the clinical group of inflammations that we are accustomed to class as eczema. The difficulty is further increased by the divergence of opinion as to what constitutes the disease. In Brocq's conception of eczema as a pure cutaneous reaction, he considers only the vesicular type. We have, however, forms of cutaneous catarrh, in which the vesicle does not appear, but where we find under the microscope the same vascular and epithelial changes which exist in certain stages of vesicular eczema. The agent which provokes the outpouring of serum may in one case have such a slight chemiotactic influence as only to give rise to an epithelial edema which stops short of vesicle formation.

The serotactic power of the irritant, on the other hand, may be so intense as to elevate large areas of the stratum corneum. Between these two extremes all grades of epithelial edema may be found, producing slight redness with scaling, vesiculation or large oozing surfaces. The same irritant acting on different individuals may give rise to a vesicular eruption, a scaling erythema or a most intense eczema madidans. It does not seem logical, therefore, to limit our definition of the affection, either from a clinical or histologic standpoint, to a purely vesicular eruption. The nature of the irritant as well as the resisting power of the tissues determines the gross appearance of the eruption.

Brocq's contention that true vesicular eczema should be classed with urticaria, the lichens, etc., as a pure cutaneous reaction, is rather a one-sided view of the question. The nature of the irritant is certainly of equal importance, though we may not be able to maintain with Unna that eczema is a distinct morbid entity always due to a specific agent.

### LICHENIFICATION OF THE SKIN.

Little or no attention has been given by dermatologists in this country or England to the endeavors made by Vidal, Brocq and Jacquet and other members of the modern French school to differentiate the condition described by them as lichen simplex, lichenification or *névrodermite* from chronic eczema on the one hand, or lichen planus on the other.

Brocq in numerous contributions to periodical literature and in his article on the lichens[5] contends in a forcible way for the recognition of an independent dermatosis which is met with about the joints, back of the neck, inner aspect of the thighs, and other parts of the body. The condition in question occurs in neurotic subjects and first manifests itself as an obstinate pruritus. Under the influence of scratching the skin becomes altered in color, slightly thickened with deepening of its normal lines and the seat of numerous closely aggregated flat papules of a dull red color.

The papules are less well defined than those of lichen planus and have neither their polygonal outline nor their central umbilication.

Transitional forms are met with which are somewhat difficult to differentiate, but the two eruptions have quite characteristic features which enable them to be recognized by the expert diagnostician.

*Névrodermite* or lichenification is distinguished from chronic eczema by its peculiar manner of evolution and the absence of vesiculation or crusts. It is always preceded by localized itching and preserves an absolute dryness throughout its course. It is chronic, rebellious to treatment, and tends to relapse.

Lichenification may develop about a patch of chronic eczema, a lichen planus or other dermatoses and thus obscure the underlying condition. The clinical description of the affection with the details of diagnosis are fully considered in Brocq's[5] article and strongly support his contention that the dermatosis deserves a distinct place in dermatologic nomenclature. It is at least descriptive of a clinical condition which can in a certain number of cases be distinguished from lichen planus and chronic circumscribed eczema. In doubtful eruptions an examination of the oral mucous membrane will sometimes determine the diagnosis, for in this region lichen planus presents quite characteristic changes.

The writer has recently had under his care two cases of chronic thickening of the skin with hypertrophy of the horny layer involving the entire cutaneous surface. In both cases intense pruritus was present. Over the extensor surfaces of the joints, the gluteal folds and elsewhere the skin presented typical lichenification. No moist lesions were present in either case, nor was there any development of lichen papules. The histologic changes consisted of a chronic inflammation of the derma with a moderate acanthosis and marked hypertrophy of the stratum corneum.

The conditions described could neither be called chronic eczema nor lichen planus, but corresponded in all details with Brocq's generalized *névrodermite*.

### STREPTOGENETIC AND STAPHYLOGENETIC DERMATITIS.

There is little doubt, in the light of modern clinical and bacteriologic research that many types of catarrhal inflammation of the skin which were formerly called

idiopathic eczemas, are in reality due to the local action of the streptococcus and staphylococcus either alone or in combination. The forms of dermatitis which develop on surfaces irritated by purulent discharges from the nose, ears, etc., the spreading dermatitis from chronic leg ulcers, long-standing localized patches of so-called eczema, traumatisms, professional dermatoses, improperly cleansed scalps in infants and adults, are only to be interpreted as infections.

We are largely indebted to the painstaking work of Sabouraud in the bacteriology of post-impetiginous eruptions for the proof of this position, clinical confirmation of which is afforded by daily observation.

Engman[6] has added to our knowledge of these infectious forms of dermatitis by a careful study of a series of cases as well as by experimental inoculations. His observations, which cover a period of several years, recall to all of us some of the types which he has so well described.

In the skin service of the city hospital with which the writer has been connected for many years, such types of infectious dermatitis are more frequently met with than symmetrical vesicular eczemas. It is not unusual to see rapidly spreading scaling and moist dermatitis after local pustular lesions or traumatisms which yield to antiparasitic applications. Eczema madidans can be simulated exactly by streptococcus infection, as was recently illustrated by a personal case. In an elderly man impetiginous lesions appeared over the leg which rapidly became diffuse and destroyed the entire horny layer, leaving a raw surface from which a constant flow of serum took place. The discharge conveyed to other parts of the body reproduced bullous lesions which quickly led to surface erosions with serous discharge.

A paste containing a small amount of ammoniated mercury healed the condition within a week.

The variations in the clinical types of these affections depend, in Engman's opinion, on the chemiotactic power of the organisms and the depth of the accidental inoculation. A toxin whose serotactic power is very great gives rise to an impetigo vesicle, while one less active produces a parakeratosis, widening of the lymph channels in the epidermis, acanthosis, etc., i. e., the epithelial changes of eczema.

The rôle of the streptococcus as a causative agent in impetiginous and bullous affections of the skin and as a secondary complicating factor in many forms of eczema and dermatitis, is assuming more and more importance. Its etiologic relationship in some types of pemphigus has been proven, and it is not unlikely that pemphigus vulgaris may be shown to be an affection of streptogenetic origin.

The writer has recently observed a fatal case of bullous eruption which followed a crushing injury of a finger, in which these organisms were found in the blood and skin lesions. Bullæ were disseminated over the entire cutaneous surface and the clinical picture was one of pemphigus vulgaris.

Krzystalowicz[7] has demonstrated the presence of streptococci in the bullæ as well as the erythematous lesions of a chronic affection of the skin which presented the objective features and course of a pemphigus.

We can not, of course, claim that all cases of pemphigus have a uniform etiology, but we know that forms of bullous dermatitis indistinguishable from that affection are due to the implantation and growth of the streptococcus. A vast amount of bacteriologic research is yet needed to elucidate many of the disputed questions in microbic skin affections.

After we have eliminated from the old group of affections comprised under the name of eczema the so-called infectious eczematoid dermatitis, post impetiginous catarrhs of the skin, seborrheic dermatitis and the class of eruptions called *névrodermites*, we have left acute vesicular eczema often manifesting itself as a symmetrical eruption.

The bacteriologic investigations that have been made in the last few years show that the primary vesicle in cases of this kind, to which it is proposed to restrict the name eczema, is almost invariably sterile, so that although it is conceded by almost everyone that the development of pyogenetic and other microbes on an eczematous surface modifies the pre-existing inflammation, their primary influence in exciting an acute vesicular eczema has only been admitted by a few dermatologists. It would seem because of the amicrobic nature of the primary vesicle that we must admit with the advocates of a constitutional origin for eczema, that such a type exists. We are not, however, forced to accept this view by the failure to detect organisms in the typical lesion of the disease, for the investigations of Bender, Bockhart and v. Gerlach[8] have harmonized in a striking manner the conflicting views which have prevailed.

As a result of numerous experiments with the filtered products of bouillon cultures of staphylococcus aureus and albus typical eruptions of vesicular eczema were produced by these investigators, the early lesions of which were found to be sterile. Staphylococci alone gave rise to miliary pustules or other purulent skin affections, but in combination with the filtered chemical products in bouillon cultures eczematous lesions resulted.

Eczema is not, in their opinion, due to the direct action of these germs, but to the toxin which they secrete.

It is this toxin which is slowly generated from the staphylococci usually present in the skin follicles and which under favorable conditions permeates the perifollicular tissues that produces the phenomena which are called eczema.

The constitutional causes of the disease are the contributing factors which favor the reaction in the skin; the real cause is probably the chemical products of the staphylococci.

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## DISCUSSION.

DR. JOSEPH ZEISLER, Chicago—I have long held that it is most unfortunate to try to base our conception of any skin disease on etiologic factors alone. The moment we attempt to classify skin diseases on an etiologic basis we must stumble. It would be easy to adduce numerous illustrations to this proposition. Take urticaria; what would become of that rather clearly defined clinical entity if we undertake to divide it as to local causes, intestinal, neurotic causes, and so on? In a great many diseases, like lichen planus or pemphigus, the etiology is almost unknown; therefore, it seems that it would be unwise to separate the various types of what we recognize clinically as eczema according to the different causation. Perhaps in the future we shall have the experiments of Bockhardt, Bender and others confirmed to

the effect that eczema is, after all, in the majority of cases, a parasitic trouble. That parasites form the exciting cause I have little doubt, and nine years ago, before the American Dermatological Association, I attempted to show the probable parasitic nature of eczema, and I am happy to find now that Dr. Fordyce brings out views in conformity with that theory.

DR. L. DUNCAN BULKLEY, New York—Although identified more especially with the internal or constitutional origin of eczema, I recognize fully the local and often microbic element in certain cases. In my lectures I frequently present cases with the diagnosis of parasitic eczema; such are seen especially on the lower extremities, also on the hands and elsewhere, presenting sharply defined outlines. These are often quickly checked by an ointment with powdered rhubarb, 4 or 5 per cent. We also see constantly the seborrheic eczema of Unna, often starting on the scalp and thence affecting other portions, and, with many others, I am inclined to believe it due to the monococcus of Unna or a diplococcus. These we see yield to resorcin and sulphur used in proper combinations. Other impetiginous forms of eczema we all recognize to be influenced by the invasion of staphylococci.

But, after excluding all cases which could come under these or other heads, there are a vast number of cases of eczema where, both from the clinical features and microscopic findings, no parasitic cause can reasonably be claimed; time and again have the vesicles of eczema been examined and found sterile.

Occasionally I take these patients and, for the sake of demonstration at the clinic, give them absolutely no local treatment, or only that which had been ineffectually used previously, and placing them on a rigid diet treat them only with constitutional means. This includes, of course, a most searching study of their functions, analysis of the urine, etc., and such hygienic and medicinal measures as are indicated. Again and again have I seen eczema, which had existed or recurred for years, yield to these measures and patients become freed from eruption with little or no local treatment, certainly none that was antiparasitic. You can not convince me that these are parasitic eczemas, although the claim might be made that the parasite no longer flourished because the soil was unsuitable.

It must be granted that as yet we know very little of the actual constitutional causes of eczema, why one person is affected, and another, under somewhat similar conditions, escapes; the same is true of many other diseases. But the clinical evidence in many directions is often very striking. I have seen many cases occur after mental or nervous shock or strain; also frequently after a series of dinners or after drinking, and all have seen it recur after digestive disorders.

We all know how the skin can be affected by internal causes, as when the eating of mushrooms, strawberries, shellfish, etc., is followed by urticaria. We know as yet very little as to the autointoxication which can arise from the digestive tract, but clinically it is an everyday observation that such may occur, and the vasomotor disturbance which produces an urticaria may increase and cause bullæ to appear, and there is no suggestion of a local parasitic influence. Why may not the lesions of eczema develop from similar causes? I grant that there is much in the constitutional causation of eczema which we can not understand, but I still can not, from a clinical basis, I can not from anything I read or hear, believe that eczema has anything as its ultimate foundation other than a disturbance of the system. I regard this paper, however, as a valuable addition to the study of the subject, and want to thank Dr. Fordyce for presenting it.

DR. A. H. OHMANN-DUMESNIL, St. Louis—To my mind a good deal of the question hinges on the conception of what eczema is. There are so many mistaken ideas now put in print that any person reading them carefully is inclined to look on eczema as a bête noir of dermatology. What is it? Is it a symptom or a disease, or is it a complex of symptoms or the symptom of some internal trouble? There is no doubt there are cases which have no bacterial origin. I have had cases of what is called vesicular eczema, which were entirely protected from all atmospheric influences, where the contents of the vesicles were completely sterile so far as bacteria were concerned. Again, in others you may find bacteria present, anaërobic bacteria. We have here a confusion of terms applicable to what may be regarded as clinical symptoms. The idea is to separate them. We have an interminable discussion taking place on certain questions depending on a confusion of terms. We must agree on the terms of the proposition to be discussed. We must have a positive definition of what eczema is, clinically, bacteriologically and etiologically. We are told that cases of eczema are treated simply by giving a purgative and the case is cured. In fact, eczema, as a gentleman from Chicago said, can be cured by a dose of calomel. It may be, but we could not consider it a case of eczema; it would be more like a dermatitis. So the whole question depends on a definition of terms. Let us recognize what the condition is pathologically and we can discuss more justly the conditions which arise, the different modifications which are present and those means which will produce the most beneficial results.

DR. JAY F. SCHAMBERG, Philadelphia—Staphylococci and streptococci are so commonly found on the cutaneous and mucous surfaces that they may be practically regarded as belonging to the normal flora of these regions. The mere finding of these bacteria in certain lesions of the skin does not necessarily indicate an etiologic relationship. The vesicles of eczema are in the beginning amicrobic; the same is true of the vesicles of smallpox and chickenpox. Indeed, even the pus of early variolous pustules is often sterile as far as the ordinary pyogenic germs are concerned. The late pustules of chickenpox and smallpox, however, nearly always contain streptococci and staphylococci from infection from the skin. There appears to me to be considerable parallelism between this secondary infection and that seen in eczema.

The essayist urges with much force that sharp lines of division can not be drawn between dermatitis and eczema. Typical examples of each condition may be trenchantly separated. In a severe dermatitis resulting from the action of the solar rays we have a very distinct and different picture from a recurrent vesicular eczema of the fingers. But, as the Chairman has pointed out, there are border-line cases in which the clinical features appear to merge into each other and which defy all efforts at differentiation.

The view that eczema is a disease of microbic origin is rather out of harmony with many clinical facts. The skin is an important organ and may, in common with some of the viscera, undergo catarrhal inflammation. Various drugs and toxins in the circulating blood may produce different forms of dermatitis; if the border line between dermatitis and eczema is a shadowy one, why are such agents not capable of directly evoking an eczema? It appears to me that changes in cell metabolism brought about by autointoxication through the bowels and kidneys are capable of eliciting eczemas, without invoking the superadded action of germs in the skin. That various bacteria may complicate and modify the eczematous process must be, I think, generally admitted. Dr. Fordyce's admirable paper offers much food for reflective thought.

DR. JOHN FORDYCE, New York—My reason for writing such a paper was to combat the views which, perhaps, generally prevail among the profession that eczema is necessarily due to constitutional causes. While not wishing to minimize the importance of such general conditions in favoring the development of eczema, I desire to emphasize the rôle played by local causes in exciting the reaction in the epidermis and papillary body to which we generally attach the name of eczema. It seems rational to suppose that such inflammatory changes are due to a local irritant of a microbic or chemical nature, which through its chemotactic power excites an outpouring of leucocytes and serum.

We have almost as good reason for supposing that eczema is caused by a local agent as that acne has such a cause. In both our best results are obtained by the judicious use of local remedies.

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**Women inspectors of immigration** have been tried in New York City and discontinued as being unsatisfactory.

## Original Articles.

# MERCURIAL TREATMENT OF SYPHILIS.

### A FURTHER CONTRIBUTION TO THE STUDY OF MERCURIAL INJECTIONS.*

M. L. HEIDINGSFELD, M.D.
CINCINNATI.

In the light of our present knowledge, success in the treatment of syphilis (at least in its earlier stages), is in direct proportion to the amount of mercury which the infected system can readily assimilate, without insult and injury. This knowledge, though purely empirical, has been so clearly and conclusively established, by centuries of observation and study, that it has become one of the most evident and acceptable of medical facts and so complete and successful have been the achievements of mercury in this direction that the experiments with serum therapy and the efforts to substitute other measures have been entirely devoid of practical results and have gained for themselves simply scientific interest.

Any shortcomings in its therapeutic powers must be imputed, in very large measure, to technical imperfections in its administration, and whatever definite progress syphilitic therapy has made has been along the lines of improved technical administration. That the administration of mercury has not been devoid of technical imperfections is clearly evident, not only from the various methods which have been employed for its successful administrations: through the skin, lungs, blood and lymph circulation and intestinal tract, but also because it has been used in innumerable simple and combined forms. It is equally evident that the technical imperfections, whatever their nature, were not of a character to impair the unqualified power and efficacy of mercury against the disease, but induced minor disturbances, purely secondary in nature, such as inconvenient or difficult administration, inaccurate dosage, and injury or insult to the organ, skin, lungs or intestinal tract against which it was particularly directed. The older forms, both inunctions and intestinal administration, have proven to be eminently reliable and efficacious, as far as checking the ravages of the disease is concerned. When failure has attended either of these forms of administration, non-success could usually be attributed to such causes as too excessive or too prolonged treatment or some grave form of complication. Efforts, therefore, to substitute methods and preparations were instituted more for the purpose of overcoming objections in technic than to achieve any great advance in efficacious action.

The oldest method, that of inunction, is objectionable because it is decidedly uncleanly, not only because a dirty ointment is rubbed freely over the body and frequent bathing is precluded, but because it soils the underclothing and bed clothes. It courts comment and publicity, predisposes an artificial dermatitis, is contraindicated in hairy individuals, and without the aid of an attendant is applied with some difficulty. Many of these objections are obviated by the wearing of mercurialized cloth (Blaschko[1]), or sacks filled with the remedy (Welander[2]), but neither of these methods have been demonstrated to be sufficiently active or reliable to merit special consideration; moreover, mercury being a volatile substance, these various methods are essentially an inhalation method of treatment, and as such are strongly contraindicated in hemoptysis and phthisis, which is also a serious objection to vaporization treatment (calomel fumes, etc.) in every form.

The internal treatment predisposes gastrointestinal disturbance, which is often sufficient to distress the patient, impair digestion, induce loss of weight, and thereby exert debilitating influences of considerable moment to the infected patient. The substitution of a long list of mercurial remedies for the pill mass, gray powder, bichlorid and calomel, in the form of biniodid, protoiodid, tannate of mercury, etc., and a more carefully regulated dosage, has been for the purpose of circumventing these objections, but has been attended with only partial success; moreover, whatever mercury is assimilated by internal treatment is carried directly to the liver, on which it not only exerts a deleterious influence but is in turn subjected to the altering, filtrating and eliminating action of the liver. Both inunctions and internal administrations are inaccurate methods, and it is impossible to determine how much or how little mercury is being assimilated in any given case. This is particularly true in internal treatment, when gastrointestinal symptoms supervene, a goodly portion of the mercury being prematurely carried away by the free discharges. Inspissated gelatin-coated pills or too strongly compressed tablets may not be assimilated and pass through the intestinal tract in unchanged form. Both the inunction and the internal method of treatment permit the patient to indefinitely continue, renew or discontinue treatment in accordance with his own volition, and thereby remove him from the regulating attention and vigilance of his physician which, in a disease prone to exacerbations, recurrences and grave complications, and accompanied by manifestations which are oftentimes overlooked or mistaken for other forms of affection, is a matter of most serious importance.

Most of these objections are entirely obviated by the injection method of treatment, and when Hunter and Hill[3] in 1856, Hebra[4] in 1864, and Scarenzio[5] in 1865, instituted mercurial injections, a new era in syphilitic therapy was marked. These investigations, on account of their severe painful character, were short lived and would have doubtless remained obscure had not Lewin[6] aroused new and well-sustained interest by his investigations in 1868, which were promptly confirmed by Sigmund[7] and Zeissl.[8] The injection method, though free from the many objections of the other methods, has not been entirely devoid of imperfections. Many of the attempts to employ this method have been short lived, and have gained for themselves a vast amount of unfavorable criticism. The innumerable forms of mercury which have been employed for injection purposes, metallic, bichlorid, calomel, yellow oxid, salicylate, sozoiodol, foramid, succinimid, bicyanid, glycocol, aspargin, alamin, thymolo-aceticum, and every form of combination, albuminates, peptonate, benzoates, suspensions in mucilage, oil of vaselin, paraffin, olive oil, lanolin, oil of sweet almonds, etc., bear abundant evidence that these imperfections not only exist but that their solution lies in an improved technic.

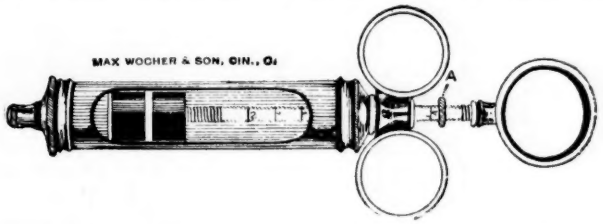
Time and space will not permit a careful consideration of the various causes of the non-success of the various preparations and methods which have been employed for injections; it will suffice to state that the most potent factors in their unsuccessful administrations have been too small and too oft-repeated dosage, which is too expensive and too time-consuming for the average patient; too severe and painful reaction, even

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. H. W. Stelwagon, W. L. Baum and J. A. Fordyce.

to the degree of abscess formation; unstable character and difficult preparation of the remedy; danger of embolism and other grave forms of complication following its administration. A preparation which obviates these objections more successfully, I believe, than others has been the oleum cinereum, or gray oil after the formula of Lang.[9] In a preliminary report read before the Ohio State Medical Society and published in THE JOURNAL[10] of the American Medical Association, the marked advantages of this preparation in modified form, consisting of 3 to 4 parts of mercury to 1 part of lanolin, with just sufficient liquid albolene to render the preparation thin enough for injection purposes, were demonstrated from a series of 2,000 injections covering 240 cases of syphilis in clinical and private practice. Although intolerance was manifested in about 10 per cent. of the cases and the preparation did not possess the full desired degree of stability, I was so favorably impressed with its general excellence that I have continued to use it, as far as practical, to the exclusion of every other form of treatment. Subsequent study and experience has led me to make a few additional modifications, which have obviated the few remaining objections, and have placed it in such a perfected state that I am firmly impressed that it bids fair to ultimately supplant all other forms of treatment.

These changes, and the causes which prompted their consummation, are as follows: In the 2,000 or more injections which were made with the original formula, although Lesser's[11] precaution to remove the syringe from the needle after its deep insertion, in order to test for hemorrhage, had not been observed, not the slightest symptom of embolism, in the form of syncope, cough, pain in the chest, dyspnea, etc., as first observed by Lesser[12] (1 case), and subsequently Lesser[13] (2 cases), Quincke[14] (7 cases), Lindstrom[15] (2 cases), Oedmansson[16] (12 cases), Blaschko[17] (3 cases), Möller[18] (28 cases), and innumerable others was ever noted. Inasmuch as the frequency of embolism, following injections, varies considerably with the experience of different investigators, Möller,[18] for example, has observed it 28 times in 3,835 injections, Neisser[19] once in 800, Epstein[20] 7 times in 8,292, and Harttung[21] but once in 8,000 injections, it can be seriously questioned on the one hand how carefully the symptoms have been observed and interpreted, and on the other how inadvertently overlooked. These facts did not inspire me with such confidence as to not take prompt cognizance of a symptom of such grave nature, however slight in character, and when J. S., aged 29 years, infected himself with syphilis in January, 1902, and underwent a course of mercurial injections in February and March and a second course in July and August, presented himself on Nov. 7, 1902, seven days after he had received the twelfth injection of the third course of injections, instituted Sept. 23, 1902, with a well-marked left-sided facial paralysis, my fears for an untoward result were momentarily, at least, realized. My fear was intensified at this juncture by Dr. Gilbert Bailey, who reported to me that E. P. M., whom I had seen with him in consultation, Oct. 29, 1901, relative to a very grave infection of syphilis which baffled all ordinary measures and whom a course of injections, at that time very materially benefited and for whom he had just administered a subsequent course of injections, had been suddenly seized with a paraplegia of the lower extremities while en route to New York. One physician out of three who had seen the case in consultation in New York City ascribed the paraplegia to the injections, the remaining two, however, dissented from this opinion. Although the symptoms manifested in neither case could be attributed to the injection, the first was a Bell's paralysis, due to a severe cold from which the patient was at that time suffering, as clearly demonstrated by means of immediate tests, and its very brief and uneventful course; the possibility of such an occurrence prompted me to eliminate as much of the danger as circumstances would permit.

The danger of embolism was all the more forcibly impressed on me at this time by some work in paraffin prosthesis which I was pursuing after the method of Gersuny,[22] and particularly by reports of embolism by Pfannenstiel[22] and others, in their experience with paraffin prosthesis. The mineral nature and exceedingly stable character of paraffin and its closely allied product, liquid albolene, which, by reason of its more fluid character, predisposes all the more strongly to embolism when injected subcutaneously, would impart not only antagonistic properties to any area where it would, perchance, find an unfavorable lodgement, but its future disintegration, absorption, elimination and removal would be definitely precluded, according to the interesting and carefully conducted experiments of Juckoff,[24] Hans Meyer,[25] et al., and the lesion would become more or less permanent in character. My prosthetic experiments also demonstrated that paraffin was more or less of a local irritant, and I attributed what little reaction my former mercurial injections induced, which was




sufficient in about 10 per cent. of the cases treated, to warrant a change to some other form of treatment, in large measure directly to the liquid albolene.

I therefore determined to make the injections without incorporating liquid albolene, which has been accomplished, with every indication of complete success, for the past six months, according to the following formula and technic:

℞ Hydrargyri bidistill.*
Lanolin (Liebreich), āā..... 120
Conteratur usque ad perfectissimum extinctionem hydrargyri

Sig.: Inject one to three minims (deep gluteal or subcutaneous interscapular) twice weekly.

This preparation has the consistency of ordinary lanolin, and should be gently heated to about 100 F. before it is drawn into the open glass barrel of a hypodermic syringe. Great care should be exercised to carefully exclude all the air from the properly filled barrel; the syringe is then adjusted and armed with a 7/8 inch 22 gauge needle, the retaining screw (Fig. 1, A) run down, by which successive 1 to 3 minim doses are measured off for subsequent injections. If the preparation in the syringe is maintained at a temperature of 80 to 90 F. an ordinary 20 minim glass barrel syringe can be employed, otherwise an extra heavy syringe—an ordinary dental obtunding syringe (Fig. 1) answers admirably—should be used in order to withstand the pressure.

* Bidistilled mercury, same as dentists employ for the manufacture of amalgams, should be used, which can be readily incorporated into an equal amount, by weight, of lanolin, in a few moments, by rubbing them togethed in a clean mortar, under ordinary aseptic precautions.

This preparation possesses perfect stability at all ordinary temperatures and insures the greatest degree of tolerance; although the remedy has been used, as far as practical, to the exclusion of every other form of treatment, and a thousand injections have, approximately, already been made, there has been relatively little localized reaction and induration and the patients take such little note of subjective pain or distress that they generally can not remember whether the last injection was made in the right or left buttock. A change to some other form of treatment has not been indicated in a single instance. Its semi-solid character (at 50 F. it can be expressed from the syringe in the form of a molded filament) minimizes the little danger that exists from embolism, and it is of such a nature that its complete absorption and elimination is ultimately assured.

The injection should be preferably made deep into the buttocks, perpendicularly to the surface of the skin, at its most prominent aspect, at three to four-day intervals, until 12 to 15 injections have been administered. The initial dose should contain about 1 minim, which can be gradually increased to 2 or even 3 minims (1 to 2 grains or more of metallic mercury to each injection). By this method relatively ten times more mercury is administered with each injection than with regulation 15 to 20 minims of the 1 per cent. bichlorid, foramid or succinimid solutions, and practically twice as much as the regulation injections of calomel, salicylate, thymoloacetate and yellow oxid injections.

In women the injections can be made interscapular, subcutaneously, and, though they are well tolerated, they are usually attended by a slight degree of reaction, owing to their more superficial deposition.

There is no plugging of the needles from the use of this preparation, which is an objection which has been raised against the use of insoluble injections (Bayet[26]). My personal experience impresses me that there is no indication for a progressive decreased dose or gradually prolonged intervals between injections, as urged by Ullmann,[27] Lang,[28] et al., in order to prevent accumlative effects and consequent unfavorable action in ptyalism, mercurial nephritis and allied complications. Mercurial stomatitis was avoided by exercising good care of the teeth, as far as practical; but when it did ensue, in a few instances, as it is frequently wont to occur, especially in clinical practice, its course was scarcely more severe or intractable than when it results from other forms of treatment.

In recent infections the injections were instituted with the appearance of the roseola, in accordance with the well-sustained views of Düring,[29] Taylor[30] and Watrezewski[31]: three courses of injections of 15 each are administered at four-month intervals the first year, two at six-month intervals the second year, one the third and one every two or three years thereafter.

Although the clinical results following the use of this preparation have been uniformly good, and the cases without exception showed prompt and marked improvement, not only in point of rapid amelioration of symptoms, but also in appetite, color and activity, followed by a state of well being that persists for many months after treatment is suspended, the good effects derived from this method do not differ materially, I believe, from those of other methods of treatment. It is simply the assimilated mercury which is effective in all cases and when non-success attends its administration it is due to such causes as faulty assimilation or its deleterious influences on the important organs or the system at large. In the injection treatment mercury is placed where it will do the greatest amount of good with the least deleterious effect, and the other natural advantages in the way of cleanliness, control of patient, accurate dosage, should justly render it the ideal and popular method of treatment. The obstacles which have heretofore defeated this realization, intolerance, small and oft-repeated dosage, instability, difficult preparation and administration and distressing complications, no longer attain in this new form of treatment.

22 West Seventh street.

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## DISCUSSION.

DR. A. H. OHMANN-DUMESNIL, St. Louis—I am very much interested in the hypodermic treatment of syphilis because nowadays I confine almost my entire treatment to that method. I have better control of the patient and the dose of mercury he receives and the regularity with which it is received. I have been in the habit of using a solution of bicyanid of mercury and have never seen any untoward symptoms from its use. In over fifty thousand injections I have never seen a purulent complication. That is easily understood as the bicyanid of mercury is antiseptic. There is no particular pain, although when the solution is strong there may be pain lasting an hour or so, then it disappears. I think it is a good sign of lack of pain in the subjective symptoms when the patient comes back regularly for his injections. I put the patient through a course of from twenty to forty days, then give him a rest of fifteen or twenty days, then give him another course. With that method I have had the pleasure of seeing very good results. In some cases that were old, where there was a right hemiplegia, the paralysis disappears entirely, instead of having paralysis caused by the injections. Cases of syphilitic insanity give way in four or five weeks. In alcoholics and patients with homicidal impulses these symptoms disappear, and I have had patients under observation for five or six years who still remain clear in intellect and with no other symptoms manifest. Judging from these results the hypodermic method of treating syphilis seems to be successful—no untoward symptoms, good final symptoms and progressive improvement. I hardly think any other method could do as well. I agree with the reader that mercurial inunctions are dirty and not always adapted to the case. In Germany you can make these inunctions, the patient will go through his course, and in Hot Springs, Ark., you give him 25 packets, one to be rubbed in daily, and he takes a hot bath to eliminate the mercury, but you see him later on with rheumatism. You would not dare to predict a complete cure from a few injections, but they will predict cures from a few inunctions, which is not true, and if you read the reports they all publish you will find a number of relapses occur, and the treatment is begun again.

DR. J. B. KESSLER, Iowa City, Ia.—This is an ideal treatment, I should judge, but in practicing in a mixed district, country as well as city, the injection treatment would be impracticable in a large number of cases. With inunctions, protoiodid or bichlorid internally, the disease does not yield as readily as by injections. So in city practice, in properly selected cases or in rebellious cases I should judge the injection treatment would be desirable.

DR. H. G. ANTHONY, Chicago—I never employ hypodermic medication as a routine method of treatment. It should only be employed in exceptional cases which will not yield to other methods of treatment or else in conditions which are dangerous to life. Under other circumstances it is my opinion that other methods should be employed. Ever since hypodermic medication has been used the profession has been endeavoring to find some new compound of mercury which was superior to any other. Whether the one the Doctor advocates to-day is better than those which have preceded we can only determine by actual experience, but we do know that of all the compounds of mercury used up to the present time none is so powerful as calomel, and therefore in severe symptoms of syphilis it is best of all to use. It should be used in only a few doses; if two or three doses do not have the effect there is no use in carrying the method farther.

As to the technic, the Doctor plunges his needle perpendicularly to the skin. It has been shown by Möller that with hypodermics of any oil thrown into the gluteal region of the cadaver and carried deeply one injection out of three enters a vein, and that is where there is danger from embolism. In their efforts to avoid an abscess they invented the method of carrying the mercury deep into the tissues, and in doing that the point of the syringe enters the vein and produces an embolus. We can never tell when we will strike a case in which there is an idiosyncrasy to these poisons, where there will be intoxication. This is seen in various cases, where it was necessary to incise the injection and curette the part to remove the mercury and its poisonous effects. Should that become necessary it would be better to have the mercury deposited subcutaneously, and that can be readily done by using a long needle and depositing the mercury at least two inches from the entrance of the point of the needle. That is as good as carrying the mercury deeply.

DR. JOSEPH ZEISLER, Chicago—I do not feel like allowing this subject to pass without saying a word or two regarding the undue authoritative attitude which the reader of the paper assumes when he says he has used this method to the exclusion of all others, and hopes we will adopt the method. The fact is, there is absolutely no method of treating syphilis on record which will surely promise the avoidance of a relapse, and that would be the only criterion, in my opinion, for a method we should be willing to adopt. We use mercury to-day for the treatment of syphilis, unfortunately, I would say, because I am not in love with mercury as a remedy; I look on it as a very poisonous substance which we use for want of anything better. We use it in a symptomatic way; all we can accomplish is the removal of symptoms. If Dr. Heidingsfeld will undertake to treat a patient with hypodermic injections of this gray oil for years I admire his tenacity and the nerve of his patient. Besides, we know that we can not surely cure syphilis with any one method, and it will not do to say one method is better than others; we know that many physicians treat syphilis successfully with internal administration of mercury only, or with injections of the bichlorid, or inunctions, which are not to be forgotten; and we have no right to put one method before another; the selection of this or that method is a matter of personal like and dislike.

I want to call attention to some defects in the Doctor's technic. In using mercurial injections I would never employ a metallic syringe. Mine are made of hard rubber, except the needle, which must be of steel. My needles are twice as long as these. I do not think the Doctor should urge his instrument and technic too strongly on those acquainted with the injection treatment of syphilis.

DR. LUDWIG WEISS, New York—As regards the choice between ointment or subcutaneous treatment of syphilis, I maintain that inunction is the dirtiest but the best method, and the fact that it is somewhat unclean ought not to deter us from using it. Whether or not absorption takes place by pressing the mercury globules into the skin—globules of mercury have been found in the follicles—is a moot question. I always use inunctions unless compelled, by other indications which forbid their use, to employ some other method. It is true that the injection method is clean; it is true that we can gauge our dosage and make it much surer, at the same time we store up mercury in the system the action of which sometimes we are not able to stop. It happened to me in one case, where the patient had a most vigorous elimination of mercury through the salivary glands, as much as three pints a day. The patient died later of brain syphilis and exhaustion. If the patient had been on the injection treatment the stored up mercury would have increased and made uncontrollable this terrible salivation. He was taking inunctions, however, and I stopped the treatment immediately, and so could stop the salivation. There is an advantage in using inunctions, inasmuch as you can stop the treatment and absorption of mercury. In conclusion I will say that by the use of soluble mercurial preparations, like the bichlorid, we need not be afraid of embolism. I would always prefer to use the inunction method, but in using the injection method would recommend the soluble preparations.

DR. M. L. HEIDINGSFELD, Cincinnati—Most of the objections which have been raised in this discussion, in regard to this method of treatment, have been carefully considered and, I believe, fully answered in the body of the paper. I have studiously avoided giving this preparation the preference over any other preparation of mercury, or this form of treatment over any other form of treatment, except on purely empirical grounds, clearly evident to any casual student of medicine. Whether these preferences hold or not must be determined, not by blind skepticism, but also by empiricism, gained from clinical experience. So many preparations and methods of treatment have already been tried and found wanting that a certain amount of skepticism relative to every new form of treatment is readily pardonable, and our preference is naturally for that form which has served us best. If the injection treatment has served best in rebellious and exceptional cases, it seems to me that there can be no valid reason for not using it in every case, unless it be that it distresses sorely or is poorly tolerated. If it is mercury, and mercury only, which is the effective agent in the treatment of syphilis, I can not concur with Dr. Anthony that its salt, calomel, is more powerful, unless it can be proven that it is more easily assimilated, or can be administered in relatively larger dosage. The danger of embolism is, I believe, as I have endeavored to show in the paper, a very much overrated proposition. Möller's investigations and Lesser's views have been disparagingly criticised, notably by Harttung.* My personal experience of over 3,000 injections, without a single well-defined instance, speaks for itself. Dr. Ziesler's objections to the use of a glass metallic syringe are apparently not well sustained. There is but little metallic substance that is not protected by glass or the leather washers in the syringe for the mercury to attack. The most exposed area is the necessarily metallic needles, and if the Doctor is consistent he should not use injections at all. The greatest harm which could result from this action would be the gradual erosion of the syringe; the preparation, I believe, does not materially suffer.

In the preparation and presentation of this paper I have endeavored to carefully observe a conscientious conservatism in all its details, and I trust to the clinical empiricism of the future as to whether conservatism or fervent enthusiasm were the dominating features.

* Arch. f. Derm. u. Syph., xl, p. 91.

**Rapid Transit Vibratory Massage.**—The *New York Medical Journal* has found a bright side to the terrible jolting on the rough tracks for our municipal street railway systems. It recommends traveling for the purpose of securing the involuntary vibratory gymnastics, which are a fad in some quarters.

# REPORT OF A CASE OF FIBROMA MOLLUSCUM.*

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CHICAGO.

## NARRATION OF CASE.

The patient to whom I wish to direct your attention is a young lady, 25 years old, whose parents are living and healthy. She has several brothers and one sister, who are also in perfect health. No member of her family has had skin lesions similar to hers. There is no family predisposition to tuberculosis, carcinoma, malformations, developmental defects, nevi or insanity. Syphilis may be excluded. Her parents are well-to-do. She has always enjoyed the comforts of a good home, and has never been exposed to the inclemencies of weather. She has never done hard work. Her time has been spent in school and in travel. She has never had a severe illness, excepting spinal curvature, which necessitated the use of a spinal brace from the age of 10 to 16 years. She menstruated when 16 years of age and has been regular.

PRESENT CONDITION.—The patient consulted me because of seborrhea of the scalp, which has recently caused considerable loss of hair, and also because of an eruption of the skin which has been present ten years. The eruption does not produce itching or other subjective symptoms; it is annoying simply because of its cosmetic effect. It does not appear in crops; it is a steady, continuous development, constantly increasing, never disappearing, but the increase is very gradual. It is imperceptible from month to month. It can only be noticed by comparing her present condition with her condition as it was several years ago.

On examination we find that there are two kinds of lesions present: spots of pigmentation and tumors.

PIGMENTATION.—The spots of pigmentation are lentigo-like, of a yellowish color, some being of such a light shade of color as to be scarcely perceptible, while others are like freckles, or the pigmentation of senile atrophy of the skin. The disease began ten years ago with the appearance of these pigmentary lesions. They are found scattered here and there over the chest, abdomen, back, arms, upper part of the forearms, thighs and upper part of the legs. They do not coalesce or follow the course of nerves. They occur sometimes in groups of six to ten, and sometimes they show no tendency to grouping. The individual spots are oval or rectangular in form. They are from pinhead to split-pea size, and somewhat larger. They are somewhat darker in the center than on the periphery.

The skin of the feet and lower part of the legs, the hands and lower part of the forearms is normal. The neck is thickly set with split-pea size pigmentations of a bronze color. The skin of the face is of a light bronze color, which, fortunately, is not mottled, hence it is not very noticeable.

The patient and the members of her family are very positive that this pigmentation of the face has been present since birth, and that only the freckle-like lesions are a later development. They believe that the skin of the face is of a darker hue simply because the patient is a brunette.

That it differs from the normal skin may be shown by the contrast of color when the back of the hand is placed near the cheek.

THE TUMORS.—These lesions commenced to appear seven years ago, and three years after spots of pigmentation were first discovered. They begin as flat plates of induration, of a doughy or pasty consistency, situated in the derma. They are oval or rectangular in form, with a long diameter of from one-half to one centimeter. The color of the integument covering the plates is sometimes normal, in which case they can best be detected by palpation. Sometimes it is of a pinkish or rosy hue. Sometimes the skin is slightly elevated, and sometimes there is no elevation. Sometimes plates develop beneath a spot of pigmentation, and again they do not.

Later, the central portion of the plates softens and becomes slightly elevated, presenting a pseudo-vesicular lesion surmounting the disk. In still older lesions this central softening increases, the pseudo-vesicular lesion becomes elevated one-half to one centimeter, and even more, forming a gelatinous teat-like tumor, the apex of which presents an opaque, mother-of-pearl appearance, resembling collodion or the umbilical cord, while the base of the tumors is covered with normal integument. Some appear as if they were about to rupture, a method of involution which has never been observed, nor have any of them disappeared, leaving scars.

The largest of these tumors (Fig. 2) is situated in the popliteal space of the left leg. It is the size of a hazelnut.

One is quite convinced that, if incised, a jelly-like contents may be squeezed out, but such is not the case. They simply bleed profusely. There are about 100 of these tumors scattered irregularly over the entire body. A few are beginning to appear on the face; on the extremities they are situated mostly on the flexor aspect. There is one on one foot and another on a finger.

By placing a finger on one of these nipple-like tumors it may easily be pressed downward into the skin, conveying a sensation as if the integument is pierced by a hole; the wall of this hole is firm and formed by the peripheral portion of the tumor, which has not yet undergone softening. This peculiarity was also observed in Taylor's case. When released, the tumor springs back to its normal position.

On the back are three sessile fibroma molluscum, and one plaque of pigmentation larger than the lentigines. It is about two inches long and one inch wide. There is another similar plaque on one thigh. (See Fig. 2.)

On the anterior surface of the chest there are two or three punctate, bright red, elevated, telangiectases, angioma simplex of Virchow, angioma senilis of Dubreuihl.

The mental condition of the patient is normal. The mucous membrane of the mouth is normal. The finger nails and toe nails and hair are normal. The urine is normal. All visceral organs are normal. The pulse and temperature are normal.

The thyroid gland is not enlarged, and there are no enlarged lymphatic glands. None of the stigmata of hereditary syphilis are present. There are no tumors about the eyes, and no pterygium.

## POSSIBILITIES OF DIAGNOSIS.

We must consider the possibility of this being two distinct and separate diseases in the individual, one of which is a pigmentary disease and the other multiple tumors, and we must also study the case with the possibility in view that this is a single disease, producing both pigmentation and tumors.

Xeroderma pigmentosum requires no serious consideration where there are present lentigo-like pigmentations of long standing, without telangiectasis, atrophy and epitheliomata.

Lipomatosis subepidermalis universalis of Kromeyer,[1] might be considered in connection with the tumors alone.

Kromeyer, you will remember, observed a girl of 10 years of age, who, since infancy, had had lesions on the body, which the mother called blisters. The lesions looked like the bullæ of pemphigus, but were firmer. After incision, fat tissue was squeezed out and microscopical examination of excised tissue showed that the lesions were fatty tumors, situated in the derma.

In Kromeyer's case there was a greater resemblance to bullæ than in my case, and pigmentation was not present.

Inasmuch as Osler[2] has stated that pigmentation of the skin is a common event in splenic anemia, and as there is one case on record of fibroma molluscum in which splenic anemia came into consideration, the case of Webster,[3] the clinician should carefully consider this possibility of diagnosis in all cases where the pigmenta-

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. H. W. Stelwagon, W. L. Baum and J. A. Fordyce.

tion is accompanied by enlarged spleen and chronic anemia.

Osler describes the pigmentation of this form of anemia as being of a steel-gray color, like in argyria, and he states that it is possibly produced by arsenic.

Arsenical melanoderma could be excluded in my case, because of the fact that part of the pigmentation, that there are a few cases on record of freckle-like pigmentation occurring in Addison's disease.

The patient had what was diagnosed as curvature of the spine in youth. Why is it not possible that this was tuberculosis of the spinal column, or Potts' disease, and that we now have tuberculosis of the suprarenals? Examination of the spine shows no deformity or thicken-

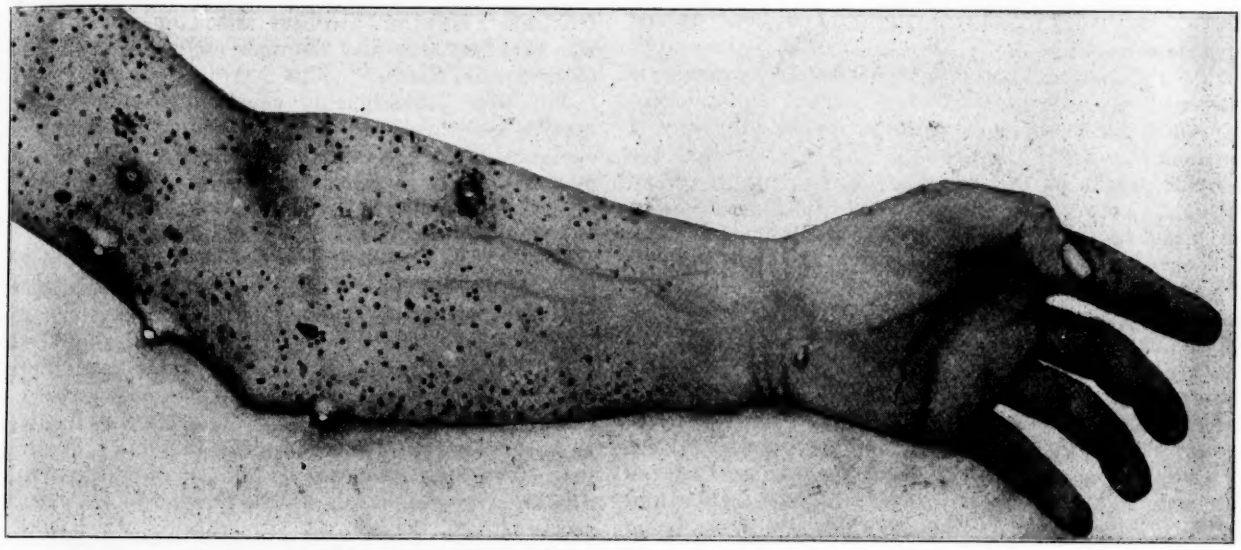

Fig. 1.—The lesions on the arm.

of the face, was present at birth and also because of the fact that the patient took no medicine before the freckle-like eruption appeared, when the patient was 15 years old.

Colloid degeneration of the skin differs from our case in the fact that the tumors in that disease are waxy

ing of the bone. The disease has lasted ten years, and there are only two cases of Addison's disease on record which lasted that length of time.

Levin[4] says that the mucous membrane of the mouth is pigmented in 22 per cent. of the cases of Addison's disease. Those parts of the body in which we would

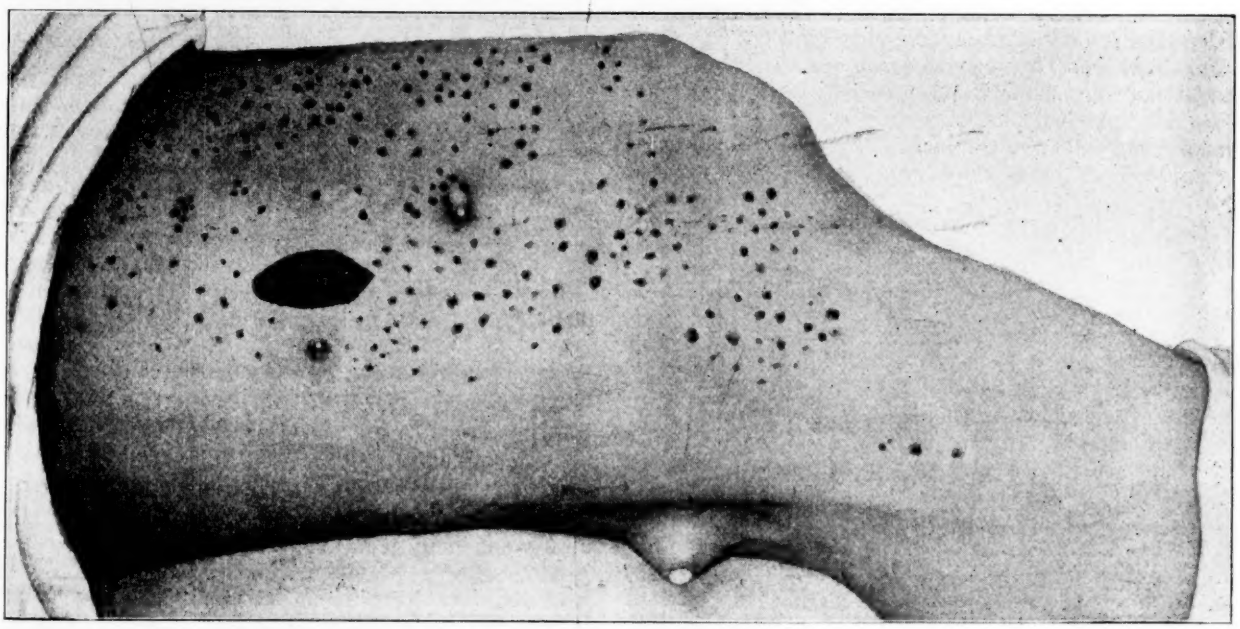

Fig. 2.—The lesions on the leg.

and not so large, so soft or so disseminate, and pigmentation is not present.

Addison's disease should be carefully considered as a possibility of diagnosis, as there are several cases on record in which cutaneous tumors were present, and also because it is possible that the statement of the patient and her family that the bronze pigmentation of the face was present at birth might be incorrect, and

especially expect to find pigmentation, such as the axillary region and nipples, are not especially involved.

Fibroma molluscum is the only other diagnosis which requires serious consideration, and it is also the only diagnosis which is sufficient to explain both the pigmentation and the tumors.

Pigmentation has frequently been observed in this disease. The tumors which we have described are not

the ordinary pedunculated and sessile tumors of fibroma molluscum, but they resemble in many particulars the tumors present in Taylor's case.[5]

Microscopic examination confirms this clinical diagnosis. A spot of pigmentation and also pseudo-vesicular tumor were removed from the arm with a cutaneous punch. The specimens were hardened in Zenker's fluid, passed through Gram's solution, successive strengths of alcohol, imbedded in celloidin, and the sections stained by various methods.

*The Pigmentary Lesion.*—The stratum corneum is thickened, especially around the follicles. This thickening is not due to an increase in the number of layers of the horny layer of the skin, but to the fact that the individual cells of this layer are less compressed than normal. They are more hexagonal in form than in any other case of fibroma molluscum I have examined. This peculiarity of the stratum corneum is present in all parts of the pigmentary specimen, and also in the tumor specimen. Sections taken from the peripheral portion of the pigmentary lesion show the pigment irregularly scattered through the rete Malpighii, being present in abundance in some parts of a section and almost absent in other parts. It is located especially in the deeper layers of the rete and, in general, resembles the pigmentation of the negro. In the peripheral sections we note some tendency to the downward prolongation and dumb-bell shape of the rete pegs mentioned by Unna in describing pigmentary nevi, certain sarcomas and xeroderma pigmentosum.

On cutting the central portion of the pigmentary lesion, we are surprised to discover a microscopical-sized molluscum, the presence of which we did not clinically suspect. It is located around a sebaceous gland. It does not differ in structure from the tumor present in our tumor specimen. The epidermis over it shows far less pigment than sections taken from the periphery of the specimen.

*The Tumor.*—The mucous layer, especially over the central portion of the tumor, shows pressure atrophy.

Stained with polychrome methylene blue or by Van Gieson's method and examined with the lower power of the microscope, the tumor mass appears to be composed of a gelatinous or colloid mass, showing some fibrous structure in the peripheral portion of the tumor, but absolutely structureless in the central portion, until the diaphragm of the microscope is closed, when it may be seen that it is nowhere devoid of structure.

The gelatinous mass is thickly studded with strongly refracting nuclei of connective tissue cells. Mast cells are not present in this tumor. We have observed them in some cases of fibroma molluscum, always located on the border of the central gelatinous mass. We can not concur in the opinion of Unna that fibroma molluscum is made up of misplaced epithelium cells. It is my opinion that the entire tumor is composed of a myxofibrous connective tissue of embryonic type, the individual cells of which are occasionally round, but usually are spindle-shaped or else show various modifications of the spindle-shape, and that the nuclei which show such great power of refraction are the nuclei of these spindle-shaped embryonic connective tissue cells.

It is extremely difficult to obtain good preparations of the individual cell. The technic which proved most satisfactory in my hands is the following: A thin section is stained with hematoxylin and eosin. The collodion is dissolved out of it. It is shaken in a test tube for one-half hour. This tears the specimen. A minute fragment of the specimen is selected, teased with needles, and mounted in glycerin, or the specimen may be stained with polychrome methylene blue, in which case I decolorize in wood alcohol rather than in 33 per cent. tannic acid, which is employed by Unna.

I agree with those authorities who believe that fibroma molluscum is a developmental defect. Their point of origin has been the subject of much discussion since von Recklinghausen advanced the theory that they develop from nerve sheaths. I concur in the opinion of Crocker, who says that they may originate anywhere in the derma or subdermal tissue.

For some unassignable cause, the embryonic connective tissue cells which are spindle-shaped and have elongated nuclei, retain these characteristics in certain locations, and in extrauterine life these deposits of embryonic connective tissue develop, forming the tumors which we clinically call fibroma molluscum.

Being a developmental defect, we are not surprised that fibroma molluscum should exist in families, though this is by no means as common as some writers would have us believe, nor are we surprised that it should sometimes be accompanied by other developmental defects, such as asymmetrical development of the face, as in the case of Danlos,[6] or generalized ichthyosis, enlarged thyroid and nervousness, possibly Basedow's disease, as in the case of Hallopeau,[7] or fibroid tumors of visceral organs, or mental defect, as in a number of cases, or that accompanying the general pigmentation, the skin of the neck should present the appearance of xeroderma pigmentosum, as in the case of Brigidi,[8] or that there should be present patches, one-half of which were telangiectases and the other half pigmentation, as in Crocker's case.

I believe that telangiectases occur in association with fibroma molluscum far more frequently than is generally believed.

### CENTRAL SOFTENING OF FIBROMA MOLLUSCUM.

The point of greatest interest in connection with the tumors of this case is the central softening which was present in the older tumors. Reasoning *a priori*, one would suppose that the central softening was due to degeneration analogous to that which may be observed in uterine fibroids; such is, however, not the case. I can find no difference in the histologic structure of those tumors which clinically show central softening from those which do not show central softening.

I believe central softening is due to location and the manner of growth. Where the tumor is superficially located and tends to spread laterally, as it increases in size, central softening will occur, while where situated more deeply and showing less tendency to lateral development, it will assume the ordinary forms of sessile and pedunculated or subcutaneous fibroma molluscum.

### THE PIGMENTATIONS OF FIBROMA MOLLUSCUM.

In my opinion, pigmentation is just as much a part of fibroma molluscum as is tumor formation.

Stelwagon[9] is almost the only author of a text-book who describes these pigmentations. He says: "Other lesions sometimes associated are brownish pigmented stains, sometimes freckle-like, small or large areas, and occasionally more or less defined discolorations. While, as Wickham states, some authors touch on this feature, present in many cases, by others it is entirely ignored. In Wickham's eight generalized cases such pigmentary conditions were present in all."

Brocq[10] says that these pigmentations are nevi and that they are usually present in association with the tumors of fibroma molluscum.

Besnier[11] says the tumors are nevi, but makes no mention of the pigmentations.

There have been a good many cases reported in which pigmentations were present.

The pigmentations are of two kinds—large plaques and lentigines. The large plaques are the more common. They have a distinct outline. They are dollar to hand size, and even larger, and present various shades of yellow and brown color. Sometimes there is but a single patch present, and sometimes the patches are quite numerous. The back is their favorite seat of location.

Why abnormal pigmentation should be present in some cases of fibroma molluscum and not in others is not known.

The histology of pigmentations occurring in association with developmental defects has not been sufficiently studied. Even in the latest reported cases of xeroderma pigmentosum and fibroma molluscum, the microscopic findings of the pigmented areas are not recorded.

Fig. 3.—Tissue under low power of microscope.

Duhring[12] says: "While, in the white race, pigmentation of the skin is due mainly to the deposit of pigmentation in the mucous layer, the connective tissue of the corium probably plays the principal part in its production. This observation is particularly noticeable in pathologic conditions."

Fibroma molluscum, as is well known, is a common malformation in the colored race. I have observed the large plaque variety of pigmentation on the backs of negroes on several occasions. They stand out prominently from the general pigmented surface, because of a different shade of color. The freckle-like form I have only seen in the white race; it is rare, and when present is usually associated with large plaques and is apt to have an extensive distribution.

Severe and wasting diseases sometimes precipitate the development of both the tumors and the pigmentations; in fact, patients often state that the first evidence of disease was observed after an illness. Careful questioning, however, usually elicits the fact that there were some lesions present since infancy.

I am convinced that some cases of this character have been reported as cases of Addison's disease associated with tumors, and where no disease of the suprarenal capsules was found on postmortem, arsenic has usually been assigned as the cause of the pigmentation. That there could possibly be any relationship between the pigmentation and the tumors is not mentioned in the report of any one of these cases. When once observed, the diagnosis of the pigmentation of fibroma molluscum is not a matter of difficulty. Had my case been seen in infancy, at which time there were no lesions present excepting a light bronze color of the face, contracting with the color of the general integument, we undertake to say that there are but few clinicians who would have diagnosed beginning fibroma molluscum, and yet this diffuse light pigmentation of the face is, in my opinion, one of the characteristics of this condition, worthy of especial attention, as I have seen it in other cases.

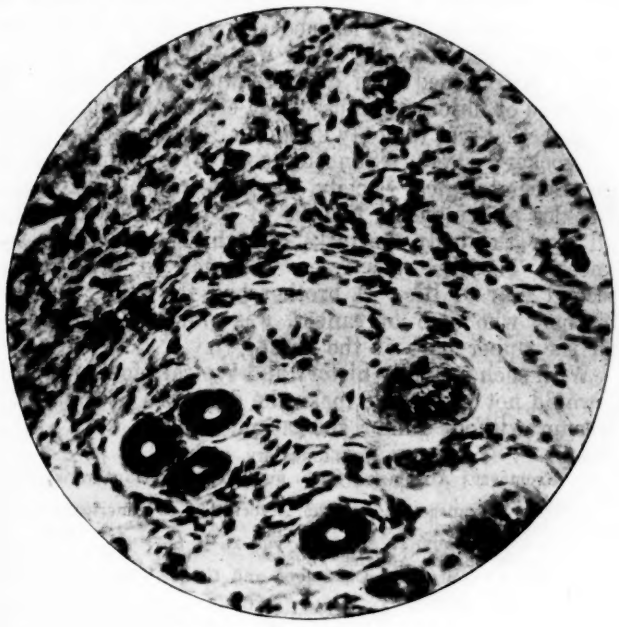

Fig. 4.—Same. High power.

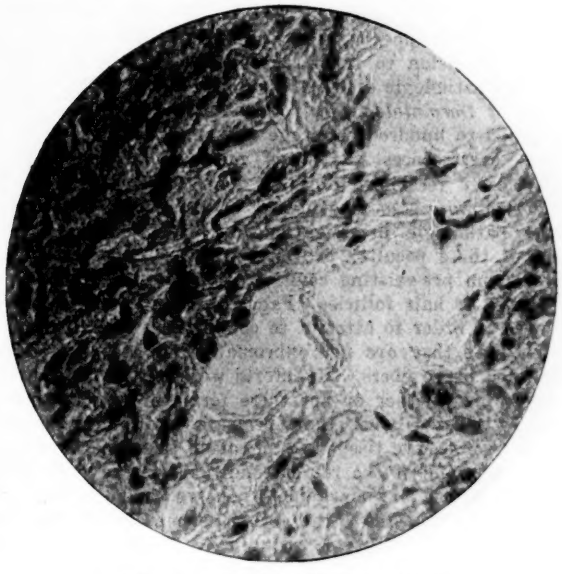

Fig. 5.—Teased specimen of tissue.

Cases may be observed in which tumors are present without pigmentations. Cases may be observed in which both tumors and pigmentations are present, and I believe cases may be observed in which pigmentations are present without tumors.

A few years ago I observed a lady who presented a peculiar pigmentation of the face. It was diffuse, of a light yellow shade of color, very noticeable, limited to the face and neck. I learned that she had always had this color and that her sister was afflicted in the same way. I examined both of these women, but found no evidence of fibroma molluscum in either of them; nevertheless, that was the only diagnosis I could offer.

Crocker[13] says: "Sangster showed a young man to the Dermatological Society, in 1893, who had extensive freckles and pigment patches of a square inch in size all over the body, buttocks and thighs, nearly to the knees. The face was free. It began in the first or second year of life. A brother had the same, and his mother, who died of cancer, was similarly pigmented on the upper part of the chest."

With such a family history and typical pigmentations, I would not hesitate to make the diagnosis fibroma molluscum without tumor formation.

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## DISCUSSION.

DR. M. L. HEIDINGSFELD, Cincinnati—Dr. Anthony's instructive paper appeals to my particular interest, because I have had occasion to report some clinical data and the results of a pathologic study of a typical case in the *American Journal of Dermatology*, July, 1900. This case also showed, in addition to hundreds of large and small sessile and pedunculated excrescences, a large number of pigmentations which closely resembled ordinary lentigines. Small areas of leucoderma were also in evidence. I endeavored to determine in the pathologic investigation the exact nature and the origin of these peculiar growths, whether or not they were derived from pre-existing connective tissue (Rokitansky) fat, (Virchow) or hair follicles (Fagge). No special technic was employed in order to attempt to confirm von Recklinghausen's opinion that they are neurofibromata and are derived from medullated nerve fibers. My efforts were particularly directed to determine whether or not these forms of growth could be distinctly classed with the fibromata or connective tissue tumors. Connective tissue reduplication in the form of tumor formation is one of the rarest conditions encountered in dermatology, which is remarkable when we consider with what frequency and facility the other elements of the skin, glands, epidermis, fat, etc., reduplicate themselves. There is only one distinct form which can be readily classed with the true fibroconnective tissue tumors, and that is true keloid. False keloid, because it shows no tendency to enlarge or progress beyond a certain point, can scarcely be classed with the fibroconnective tissue tumors. The cells of the molluscum fibromata contained irregularly or oval-shaped nuclei, uniformly distributed in an almost homogeneous intracellular substance, which is faintly fibrillated, but the fibrils can not be traced to any distance, as in the case of the ordinary forms of fibroconnective tissue, and even embryonic connective tissue. Although the cells are somewhat spindle-shaped, there is no marked progressive change towards elongated connective tissue-like spindles, and nowhere is there any evidence of a distinct connective tissue formation, which is an important link, when we try to class these growths with the embryonic connective tissue group. There are many minor distinguishing features which also serve to distinguish these growths from each other and place them in separate classes. In other respects my findings conform to those of Dr. Anthony. Hair follicles were present, but showed no cystic dilatation and no hypertrophy, but rather pressure atrophy. Mast cells were abundantly present, particularly at the periphery of the growth in the surrounding connective tissue.

DR. L. DUNCAN BULKLEY, New York—In regard to therapeutic measures in these cases of molluscum, we know nothing to do for them as a rule but excision. I have a man under my care who must have had many thousands of these little tumors. I have been using on some of these little tumors a high-frequency electric current with a carbon electrode. The effect of this is to inflame them and cause a superficial slough; under this many of them have shrunken down and are disappearing. As far as I know this is a new method of treating multiple fibroma. In the three or four weeks I have been applying this method many of the tumors have shrunken and disappeared. I merely suggest it, but would like to have those who have static machines try it.

DR. JOHN A. FORDYCE, New York—I find among the photographs which I brought to the meeting one which is almost a counterpart of Dr. Anthony's. I have seen two cases of molluscum fibrosum with pigmentation of the skin of the type he describes. Minor grades of pigmentation in connection with the affection are not so uncommon. The development of the two conditions are probably closely related.

DR. HENRY G. ANTHONY, Chicago—In answer to Dr. Heidingsfeld, I excluded xeroderma pigmentosum. There is no leucoderma in this case; I did not mention it because I was not trying to embrace everything known regarding fibroma molluscum. The histology of fibroma molluscum has long been a subject of discussion and a great many men have worked along the line of trying to determine what relation it has to the nerves. They have not paid sufficient attention to the histologic structure of the cells. When I had separated the individual cells so that I could see them I concluded they were embryonic connective tissue cells; they resembled that more than anything else. I took my specimen to a general pathologist and asked, "Do you think those are embryonic connective tissues?" He said, "Certainly! where did you get them?" Then I consulted another man without telling him where I obtained the tissue, and asked him what it was. He said the same thing. The idea I have in mind is this: We know that the cells of the embryo are first round and then they become spindle-shaped with a marked nucleus, and under normal conditions these embryonic cells are transformed into connective tissue cells in the latter part of intrauterine life. For some reason, possibly the presence of the toxins of the chronic infectious diseases, this change does not properly proceed in certain locations, scattered here and there over the surface of the body. Then the individual is born with deposits of embryonic connective cells, the presence of which is not suspected until the system is subjected to a severe strain, such as puberty, as in my case; then these hidden deposits of embryonic connective tissue grow and produce the tumors which we call fibroma molluscum. Supposing the strain which caused these deposits of embryonic connective tissue to develop should be tuberculosis of the apex of the lung, when the diagnosis which has always been made up to this time has been tuberculosis of the lung, pigmentations of Addison's disease, from tuberculosis of the suprarenal capsule and "tumors which the dermatologist calls fibroma molluscum." In other words, the clinician does not realize that there is a relationship between the tumors and the pigmentation. As I have shown, any pathologic condition of the derma may cause a hypertrophy of pigment in the epidermis, hence were concealed deposits of embryonic connective tissue cells present in the derma they could easily produce a case in

which pigmentation would be present without tumor formation.

The case Dr. Fordyce shows closely resembles mine and the fact that pigmentation was also present in his case should convince every one that I am right in stating that it is an essential part of fibroma molluscum.

## THE TREATMENT OF LEPROSY.

DISCUSSION ON THE PAPER READ AT NEW ORLEANS BY A. H. OHMANN-DUMESNIL, ST. LOUIS.*

DR. JAY F. SCHAMBERG, Philadelphia—Some of those present will doubtless remember the reports published by Dr. Dyer a few years ago on the results of antivenomous serum in the treatment of leprosy. I had occasion, three or four years ago, to use in the Municipal Hospital of Philadelphia some antivenene, obtained from Dr. Calmette of Lille, France. The leprous patient received 9 injections of this serum, each injection being followed by a febrile reaction. At the end of the ninth injection the temperature rose to a considerable degree and the patient passed through a long febrile course which was recognized as a typical typhoid fever, which disease was prevailing to an alarming extent in Philadelphia at the time. The development of typhoid fever was, of course, a pure coincidence. The leprous manifestations were not influenced by the serum nor by the typhoid fever, and the fever itself was not in any way modified by the chronic infectious disease from which the patient was suffering.

DR. J. H. DUNCAN, St. Louis—We do not see much of leprosy in St. Louis. About two years ago I had a patient living in one of the Gulf cities. I exhibited the case to our Willan Dermatological Society. Examination was made of sections from the nodules by Dr. Engman, and it was pronounced leprosy. One case of leprosy from St. Louis had been to Unna and returned after two or three years apparently cured; there were no lesions and the patient seemed well, as our cases of syphilis seem well. I was not prepared to treat leprosy, and at the suggestion of Dr. Engman I referred this lady to Unna, and she went. That is over two years ago, and she has written me probably three letters, each letter stating that she is improving, the disease is disappearing, but the Doctor tells her she must stay a year or two longer. A few months ago her brother came to me with letters and pictures from her, photographs of the condition of parts of the body taken when she went to Unna and of the same parts taken eighteen months after she went there, and the change in the appearance of the part to me, who am not very familiar with leprosy, was most marked. She wrote most glowing letters about the disappearance of the lesions.

Dr Dumesnil speaks of a cure. I do not know what he means, but the case which came back from Unna three years ago is to all appearances well. I am told he still takes internal medicine.

DR. M. P. VANDERHORCK, Minneapolis—I have had some experience with leprosy in Minneapolis. We have in Minnesota on record some 78 or 79 cases, mostly among Norwegians. In the treatment of those under my care I use local applications of chrysarobin, and I have seen nodules disappear in a day or two by being covered with chrysarobin paste. We have gotten good results from chaulmoogra oil; it always improves them. I had one patient who had lost one eye and had ulcers all over the body, the nodules being very pronounced. At the time he came under my care he weighed 120 pounds; he was taken to the City Hospital and isolated. We put him on chaulmoogra oil, with good food and hygiene, and later on he weighed from 190 to 200 pounds, and kept in good health ten years, until he died from an attack of pneumonia. None of these cases has been cured; relapses would come after the medicine was stopped, and sometimes the symptoms were graver than before. We have no ideal treatment for it; there is no cure we know of, but we all hope much from serum therapy. Our health officer has been watching the cases throughout the state, and with improved hygienic conditions is getting good results. The first case I mentioned came under my care in the fall of 1888, and I had him under close observation for ten years. He died in good condition so far as the leprosy was concerned. Others have died from tuberculosis.

DR. J. N. ROUSSEL, New Orleans—I would like to report a case in a man treated with chlorate of potash. The man was 50 years old. He had had the disease two or three years. The foreleg and feet were very much tumefied from about the middle third of the foreleg, with many ulcers present. The hands were also badly involved with tubercles and ulcers. The disease was of the tubercular type, and, strange to say, one side (the right side) was always worse than the other. He had lost the power of sensation entirely. I could apply the cautery to him without pain. After two months' use of the chlorate of potash the tumefaction began to disappear, sensation began to return, the ulcers all healed, and to-day, after about a year, he seems to be apparently well. He has no ulcerations, feels well, sensation is normal, and in every respect he is apparently well.

DR. JOHN A. FORDYCE, New York—In the class of infectious granulomata to which leprosy belongs it is not unusual to see the tumors disappear by spontaneous involution. We see it in syphilis. I have had a good many lepers under observation in the hospital, and under better hygienic conditions and chaulmoogra oil the tumors disappear, but they usually come back again, while the patient's general condition grows worse. I have personal knowledge of one case in which a cure has resulted. This patient, a well-to-do woman, was under the care of Dr. Morrow of New York. She showed the pigmentary lesions of anesthetic leprosy. The Doctor informs me that he saw her within the last year and that all the skin lesions and the anesthesia had disappeared. She had had no recurrence after eight or ten years. That is the only case in which I have personal knowledge of a cure. I think in the anesthetic type the prognosis is much more favorable and a certain number of cases do get well, but they are usually badly deformed. In this particular case there seemed to be an absolute cure with little evidence of the disease having been present.

DR. A. H. OHMANN-DUMESNIL, in closing the discussion, said: Of course, we can all detail apparent cures. For instance, in the case of a woman from Mexico, a case of tuberculo-anesthetic leprosy, sensation was entirely gone all over the body. Under heavy doses of ichthyol internally, four grams three times a day, she had a well-pronounced ichthyolic fetor; in two weeks the tumors disappeared, and if I passed a fine hair over her neck she felt it. Unfortunately, she did not live long; in the St. Louis cyclone she fell dead of fright. I have been very unfortunate in not being able to follow cases for years. I have seen a cured (?) case of Unna's. In this pyrogallic acid was used for the tubercular lesions, and he gave her internal treatment with ichthyol. She improved some until she arrived in St. Louis, when she gradually got worse and worse and suddenly disappeared. So far as the cure is concerned, I found in these cases when I went deeply into the tissues I could find microbic changes indicative of the lepra process or the bacillus of Hansen. Until everything gives reactions and permits us to see that the tissues are all normal and the absence of specific bacteria is demonstrated, we can not say a case is cured. I am doubtful of the cure of a case of leprosy up to the present because we have had no opportunity of proving the matter definitely. Another thing, there is a question as to whether a supposed cure of leprosy is placed under conditions which will prevent a relapse. Is the patient so placed that there is no possibility of environment favoring a relapse? If the patient can be segregated for a number of years we can argue from that basis, but if other conditions are permitted to work, if there is the possibility of the original potential condition, it is difficult in order to secure proof of a cure to eliminate all the factors which may be potential in the development of the disease.

*The paper appeared in THE JOURNAL, May 16, 1903.

**The Degenerate Thermometer.**—Some physicians have been testing thermometers in common use in hospitals, and find them to vary in some cases as much as two and one-half degrees. In connection with the advertisements of cheap thermometers and of thermometers given as premiums, the warning is timely.

# NOTES ON THE TREATMENT OF LICHEN PLANUS.*

JOSEPH ZEISLER, M.D.
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CHICAGO.

Intelligent treatment should be based, whenever possible, on a clear conception of the causes of disease. Etiology is bound to constitute, for many years to come, the most fruitful field for the student of dermatology, for at the present time it is but fair to confess that the essential nature of some of the most common diseases of the skin is very far from being clear to us. I need only refer to eczema, acne, psoriasis and pemphigus. Individual cases of these may admit of a satisfactory explanation; taken in their totality, we know precious little about their cause.

The same holds true of lichen planus. The most complete treatises of the day are of a remarkable unanimity in admitting our ignorance as to its etiology. In preparing this paper I have carefully studied my private case records for the past sixteen years. I have found notes of 71 instances of lichen planus out of a total of about 7,000 cutaneous affections. This proportion is considerably in excess of that given by the statistics of the American Dermatological Association, which show a relative frequency of only about 0.3 per cent. But it is a well-known fact that lichen planus occurs decidedly more often among the better classes, while being comparatively rare in dispensary and hospital practice.

Of my 71 patients, 44 were males and 27 females. The majority of them were between 30 and 50 years old. The youngest was 15 and the oldest 65 years old.

In many cases absolutely no tangible cause could be detected. Taking my male cases together it would be easy to recognize them as belonging to a class of strenuous workers. Three were hard-working physicians; two were medical students in their last year at school; several were merchants with intense business activity; one a banker; one a clergyman; one a capitalist, the manager of several large estates and enormously active in public affairs; one a lawyer. Of my female patients, several offered a rather distinct clew as to the origin of their trouble. One could easily trace the appearance of the eruption to the severe shock caused by the loss of a beloved grown-up daughter; in two cases abortion seemed to be the starting point. In one case, a young lady of 19, with a very generalized eruption, it seemed to be complicated by a pulmonary trouble and general exhaustion. In a few instances intense social activity seemed the only explanation. Many of my patients were in what appeared to be perfect physical health.

The relationship to syphilis was suggested in a very remarkable case occurring in a physician who consulted me about eight years ago with a classical outbreak of polygonal lichen papules, the diagnosis being confirmed also by another colleague of much experience. This patient presented the peculiar phenomenon of multiple enlargement of the lymphatic glands, so that the question of syphilis was seriously considered; but with the absence of any primary lesion or any other concomitant symptoms that diagnosis was discarded for the time being. The patient's general physique, particularly his respiratory organs, being somewhat weak, general tuberculosis was thought of, and he was advised to spend a few months in the South, while taking the prescribed treatment for his lichen. He returned from there entirely free of the previous eruption, but now had an unmistakable palmar syphilide, the diagnosis of which again I was supported in by the colleague referred to. In the course of events the diagnosis of syphilis was borne out by further symptoms. The question has often occurred to me whether the original lichen eruption was not probably an unusual manifestation of syphilis, which disease, as is well known, is the most perfect imitator of many other cutaneous lesions.

As may be gathered from the foregoing remarks, the indications for the causal treatment of the skin eruptions in my cases were few. My therapeutic efforts during the first years of my practice were strongly influenced by the tradition of the Vienna school, which has always maintained the almost specific efficacy of arsenic in lichen planus. Many excellent results I could record with this drug; in some cases a good deal of anxiety was the result of it; in a few utter failure. Besnier, who rather severely criticises the employment of arsenic as a specific, says very tersely: "We do not treat lichen; we treat the persons affected by it." But this epigram could be used with equal force in a great many cutaneous diseases.

My attitude at the present moment is to the effect that in generalized eruptions of lichen planus I would always resort to arsenic as the remedy of choice; while in the more localized or milder forms of the disease I would rather employ milder forms of treatment. The systematic and persistent use of arsenic taxes the patience of the physician and the endurance of his client at times to a degree bordering on heroism. To find, instead of improvement, that the eruption may for weeks become intensified and the pruritus almost unbearable, is certainly discouraging to both parties. Yet I must declare that some of the most brilliant and enduring results in the treatment of the disease have been achieved after just such exasperating conditions. I need not dwell in detail on the form of administering arsenic. As it is difficult to see patients daily for the purpose of hypodermic medication, I have, as a rule, used either the well-known Asiatic pills in a somewhat modified form, or Fowler's solution, which acts equally well. My present plan is usually to begin with small doses, say an average of two drops three times a day, and to increase each dose daily by one-quarter of a drop up to the point of tolerance, but rarely exceeding 15 drops three times daily; then a return in the same proportion gradually to the small dose, and repeating this course several times if necessary.

The occasional failures mentioned above, the production of arsenical keratosis on the palms and soles in some instances and at times distinct intolerance on the part of the patient, have caused me long ago to abandon arsenic as the only or the principal remedy for lichen planus. Chiefly induced by the advice of French observers, notably Brocq and Jacquet, I have in the past eight years given a prominent part in the management of these cases to hydrotherapy, after the following fashion: My patients are instructed to take, preferably during the forenoon, a tepid bath, in which they remain quietly ten to fifteen minutes, when, by means of a hose attached to the mixer they start to irrigate the region of the spinal column, beginning at the nape of the neck, with first lukewarm and gradually quite cold water, winding up with a general sponging, and finally a half hour's rest in their bath robe. My patients are unanimous in praising the wholesome, invigorating effect of this procedure, and many have insisted on continuing it long after they are perfectly cured. One of my patients who, 13 years ago, had an exceedingly severe at-

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tack of lichen planus and who then was cured by vigorous arsenical treatment, recently presented himself, after that long interval, with a rather mild recurrence of his old trouble. He implored me to spare him the severe annoyance produced by his former treatment and I gladly consented. A course of baths as described and a free use of lithia tablets accomplished within six weeks a perfect recovery.

My experience with mercurial preparations is somewhat limited. In several instances where arsenic seemed to disagree, or where it aggravated the eruption, I have switched off rather abruptly to the protoiodid of mercury in quarter-grain doses, and have seen some decided results from it.

I usually make it a rule to use alkaline diuretics as an adjuvant to other treatments, and, as previously mentioned, even as an independent and principal medication.

General tonics and restoratives, as, for instance, cod-liver oil and malt preparations, were occasionally employed.

As regards local treatment, I have for years made use of Unna's well-known ointment, containing 4 per cent. carbolic acid and 0.2 per cent. of bichlorid of mercury. I have never used it, as he has, alone, but only as an adjunct to other methods.

Whoever has seen much of the hypertrophic or corneous forms of lichen planus will agree with me that these forms have heretofore resisted all efforts, even in cases where simultaneous generalized eruptions of lichen planus were easily managed. In some such rebellious cases I have formerly resorted to the most energetic local applications, as, for instance, pyrogallic acid, chrysarobin, and even the vigorous use of the curette, followed by caustic applications. These forms I now invariably treat by exposures to $x$-rays, and I have now notes of five cases in which large patches of that kind yielded to as few as four to six exposures to a fairly strong light for ten to fifteen minutes at intervals of three to four days. We are gradually getting to expect all sorts of wonders from the $x$-rays. Their efficacy in hypertrophic lichen planus seems to me very noteworthy indeed.

## DISCUSSION.

DR. WILLIAM L. BAUM, Chicago—Recently, in making some examinations as to the cause of symptomatic pruritis, I have had occasion to do considerable work in the analysis of the urine in patients suffering from various skin lesions which are supposed to be associated with irritation or malnutrition of the nerve centers, one of these being a case of lichen planus. The urine, which was apparently normal in all of these cases, was deficient in urea. In other words, urine which had a specific gravity of 1020 had only 0.8 per cent. of urea and at the same time a corresponding increase in the phosphates. By paying considerable attention to increased elimination, especially of the portal and renal circulation, it was found much easier to relieve these cases. I might call attention to the fact that this case had reacted very unfavorably to the internal administration of arsenic, and I had given as high as half a grain hypodermically, which had been borne poorly. With increased elimination the patient seemed to bear the larger doses of arsenic much better and made a rapid recovery. I would suggest that it might be well in all cases to examine closely into the matter of elimination.

DR. JAY F. SCHAMBERG, Philadelphia—I agree with Dr. Zeisler as to the influence of mercury in lichen planus. I remember a few patients with this disease of several months' duration who did not improve under the ordinary arsenical treatment, but in whom the use of mercury in similar dosage to that employed by Dr. Zeisler was followed by prompt and gratifying cure.

DR. A. H. OHMANN-DUMESNIL, St. Louis—I have had good results from the use of arsenious acid in some cases of lichen planus. I prefer arsenious acid to Fowler's solution, which I find produces a factitious zona. A patient whom I treated with it once told me: "I have shingles, Doctor." I discontinued Fowler's solution, put him on arsenious acid and he went on without further trouble. Instead of using protoiodid I use bichlorid of mercury. I suppose it makes little difference provided you have the mercurial effect, but I prefer the protoiodid.

DR. M. L. HEIDINGSFELD, Cincinnati—Has Dr. Zeisler ever tried the hypodermic injection of arsenic, in any of its various forms, and with what results, in the treatment of lichen planus? I have had cases which were refractory to the internal treatment, both where the Asiatic pill and Fowler's solution were administered, the eruption either failing to yield or the patient being distressed by the remedy, that yielded promptly and completely to injections of sodium cacodylate or sodium arsenate. My preference is for twenty-five minim injections of a 5 per cent. solution of sodium arsenate.

DR. J. H. DUNCAN, St. Louis—In my early experience in dermatology I used the arsenical treatment in lichen planus, but of late years have used almost exclusively the mercurial treatment, and am satisfied that the cure has been more rapid. I have used the bichlorid. At the same time I endeavor to build my patients up. All my cases without exception have been very much impaired in health, especially the nervous system involved.

DR. J. B. SHELLMIRE, Dallas, Texas—Some four years ago I treated a case of syphilitic stricture of the rectum that had an aggravated case of lichen planus. After using arsenic without effect I saw a report by Dr. T. A. Lusk on lichen planus in syphilities treated by protoiodid of mercury. I put the patient on this treatment and the result was remarkable. Later on I saw a discussion where Lusk's paper was mentioned, and the conclusion was that protoiodid of mercury was as good in cases of lichen planus which were not syphilitic as in the syphilitic ones. Those who have spoken to-day corroborate that conclusion.

DR. JOSEPH ZEISLER, Chicago—I did not go into the etiology any more than by way of reference. I would have been interested to hear from those who have seen many instances of lichen planus if they had ever been in a position of doubt concerning the eruption being a pure lichen or of a syphilitic nature.

In answer to Dr. Heidingsfeld, I have spoken of the hypodermic method and explained why I did not give it a permanent place in my treatment. It would necessitate the patient's visit every day, which is not convenient. Further, in my opinion, we could not expect the same results from arsenic used hypodermically as from other forms of arsenical treatment unless we increased the dose gradually, which is not practical.

DR. M. L. HEIDINGSFELD, Cincinnati—I missed hearing the first part of the paper and therefore failed to note what was said relative to hypodermic injections. I do not find it necessary to give the injections oftener than once every two or three days, but in case I did I would not allow it to stand in my way for the welfare of the patient. There is one reason which should appeal strongly in favor of the hypodermic method over other methods of administration. The hypodermic route avoids the filtrating, altering and eliminating action of the liver, which exerts this function, as we are learning to believe, against just such toxic substances. Its relative greater efficacy could be readily explained on this ground, and its deleterious action on the internal viscera is likewise avoided.

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**Syphilis Visceralis as a Surgical Affection.**—Trinkler advises in the Russian specialist journal that an exploratory laparotomy is far better in dubious cases than to postpone intervention until after the effect of mercurial treatment is ascertained, as otherwise the proper moment for the operation may have passed. He advises surgery for syphilitic affections of the liver when the trouble is a single gumma or the tying-off of a lobe by adhesions. He illustrates by cases the benefits of prompt exploratory laparotomy and the dangers of delay. In two of the cases he describes appendicitis had originated in luetic alterations due in one instance to hereditary and in the other to acquired syphilis.

# THE PATHOLOGY OF SUMMER DIARRHEAS OF CHILDREN.*

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The following classification of diarrheas of children, while not perfect, will give some idea of the relation of the summer diarrheas of children to other diarrheas:

1. Mucous disease.
2. Diarrheas of indigestion.
3. Diarrheas due to food infection.
   - A. The result of preformed poisons, e. g., tyrotoxicon, etc.
   - B. Diarrheas due to bacterial or other infection in which the medium of infection is the food, and in which the poisons causing the diarrhea are elaborated within the body.
     - *a*. Tuberculosis of the intestine.
     - *b*. Typhoid fever.
     - *c*. Amebic dysentery.
     - *d*. Cholera.
     - *e*. Entero-colitis due to Shiga's bacillus.
     - *f*. Miscellaneous infections.

Mucous disease, tuberculosis, typhoid fever, amebic dysentery and cholera do not fall within the class of diseases under discussion, so will be dismissed at once.

Diarrheas of indigestion are more common in summer because improper feeding is more easily accomplished in summer than in winter. Many cases where diarrhea is due to indigestion are also cases where diarrhea is due equally to food infection. Cases of pure diarrheas of indigestion are comparatively rare and have, as a rule, very little to show in pathologic changes. Indigestion may cause an acute catarrhal inflammation of the stomach. It is less apt to cause a catarrhal enteritis. If improper feeding is continued there may result a chronic gastritis or a chronic enteritis. This state of things is seen in some cases of rickets.

Diarrheas due to food infection are by far the most frequent class of diarrheas of children, and because of the greater ease of infection in summer and the greater rapidity with which infection multiplies in warm weather, they are the forms of diarrhea usually considered under the name summer diarrhea.

We sometimes see cases of diarrhea where the disease is due wholly to ingestion of toxic substances already formed in the food as a result of bacterial growth, and without infection of the patient. Such cases are rare and are cases of poisoning pure and simple. The lesions are those of an irritant poison.

More common are cases where the preformed poison is the predominating element, although the bacteria that caused the toxins are not destroyed. Such cases are the fulminating cases that are taken suddenly with severe diarrhea and great prostration. The term cholera infantum is probably best applied to this class of cases. These cases run an acute course and the patient is often dead before there has been time for any marked lesion to develop. There is apt to be very little apparent on postmortem examination. There is often some congestion of the intestinal mucosa with punctate hemorrhages. There may be an increased amount of mucus present in the intestine. The intestine is apt to be nearly empty. The tissues of the whole body may show the results of the abstraction of the large amount of water that has resulted from the numerous watery stools. The kidneys may show acute parenchymatous degeneration.

In cases of longer duration the lesions are more marked. This class merges by imperceptible degrees into the next class where diarrhea is due chiefly to bacterial infection of the intestinal contents and intestinal walls. Some of these cases are, no doubt, cases of blood infection; such are typhoid fever cases. While typhoid is not strictly a summer disease it is nearly related to the class of diseases under consideration. The known facts that typhoid in children is less apt to be accompanied by intestinal ulceration and that it runs a shorter course, while, at the same time, it is not apt to end fatally, would explain why typhoid could be easily mistaken for one of the other forms of diarrhea. This similarity is not to be wondered at when one considers the very close similarity of the colon bacillus, the typhoid bacillus and the bacillus of Shiga.

Streptococcus infection seems to be an occasional cause of diarrhea in children. It does not seem to be a very common cause, most of the cases reported having been cases where the diarrhea was but a part of a general septicemia.[1] Such cases have been accompanied by such changes as interstitial gastritis, enteritis, colitis, hyaline degeneration of the mesenteric glands, hemorrhage into the spleen, parenchymatous degeneration of the epithelium of the convoluted tubules, hyperemia of the lungs, degeneration of the alveolar and bronchial epithelium, small celled infiltration of the interstitial substance of the lungs, parenchymatous degeneration of the pancreas, etc. Streptococci are often present in small numbers where the infection is evidently due to some other cause.

Maggiore considered it highly probable that dysentery in adults was due to a *Bacillus coli communis* of intensified virulence and this conception was shared by Laveran, Arnaud, Escherich, Celli and Fiocca.[2] Ciechanowski and Nowak concluded that a virulent *Bacterium coli commune* or a similar germ caused dysentery.[3] Escherich[4] quotes Dana as finding the *Bacterium coli* as the cause of infantile dysentery. He found it in pure cultures in the stools. Of 15 cases of infantile diarrhea (between 6 months and 6 years) in his clinic, Escherich had 7 fatal cases. The disease was evidently contagious. The contagion was carried to his own 13-month-old daughter. Escherich believed the *Bacterium coli* was the cause of these cases of infantile colitis. Celli and Fiocca[2] isolated a bacillus from cases of dysentery and produced dysentery in cats with it. Later Celli and Valenti[5] concluded that their *Bacterium coli dysentericum* was identical with the bacillus of Shiga. They found it to be the cause of dysentery in Italy (Rome).

It seems highly probable that the *Bacillus coli communis* is at times the cause of diarrheas in children, but it seems much more probable that a bacillus of the same group, though a distinct species, is the specific cause of most cases of summer diarrheas. This germ is the bacillus of Shiga, which first came into prominence through the investigations of Shiga into the cause of epidemic dysentery in Japan. It is probable that the same bacillus has been previously described by Celli and Fiocca and by Celli and Valenti. Flexner isolated it from a case of dysentery in Manila, and Kruse in Germany found it also in cases of dysentery. The most convincing proof that it is the cause of summer diarrhea of children comes from Duval and Bassett,[6] who report that they isolated it from 42 cases of summer diarrhea of infants in the United States. They did not find this bacillus in the stools of healthy infants nor in the stools of infants that had simple diarrheas. The blood of infants that had summer diarrhea caused agglutination of

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Shiga's bacillus, and blood of other infants did not cause such agglutination. The proof that bacillary dysentery of adults and summer diarrheas of children are often due to the same bacillus or to varieties of the same bacillus is apparently complete.

The bacillus of Shiga is said to resemble the *Bacillus typhosus,* consisting of short rods with rounded ends, usually occurring single, but sometimes in pairs. No flagella were found by Shiga.[7] No spores have been found. It grows at room temperature, but better at body temperature. In the fastigium of the disease the slimy, bloody stools gave almost a pure culture. When the stools became purulent the colon bacillus and streptococci became more numerous. It was never found in the stools of healthy persons. Serum from patients with dysentery caused agglutination of the bacillus. Serum from other patients did not cause such agglutination. A culture injected intraperitoneally into guinea-pigs[8] caused enlargement of inguinal and axillary glands, exudation of fluid into the peritoneal cavity, exudation over the spleen, liver and intestines and ecchymoses into the intestinal walls.

Shiga found the bacillus in the rectal walls, in the walls of the ascending colon and in the mesenteric lymph glands, as well as in the intestinal contents. He inoculated himself with a dead culture and concluded, as a result of his experiments, that the poisons of the bacillus were more virulent to the human body than those of typhoid or cholera. The changes caused by the bacillus were most marked in the large intestine. The lower part of the ileum was more markedly affected than any other part of the small intestine. The stomach usually escaped. This localization of the disease process coincides closely with that of summer diarrheas of children.

In summer diarrheas of children there may be some gastritis, but it is rarely well marked. There may be some points of extravasated blood, but as a rule the stomach is free from change. The upper part of the small intestine is also usually free from change, but as we pass toward the ileocecal valve the changes appear. In the mildest cases there is but a moderate congestion. In more severe cases there are points of hemorrhage into the intestinal wall. In cases still a little more severe there are found localized areas of necrosis of the mucosa and submucosa and if the patient has lived long enough there is ulceration. The mucosa is infiltrated with round cells. Bacilli are found in the tissues of the mucosa and submucosa, rarely deeper. In some cases there is a necrosis of the mucous membrane as a whole and a transformation of it into a whitish, leather-like substance which shows no sign of nuclear staining. This layer is sharply differentiated from the inflammatory zone underneath.[9]

In cases of less severity the intestinal glands may be found in a state of cystic dilatation. Small hemorrhages are characteristic of this form of infection. In the more chronic cases there is a marked infiltration of the intestinal walls, so that they are thickened and stiffer than normal while at the same time their lumen is narrowed.

The mesenteric lymph glands usually show some changes, being enlarged as a rule. The kidneys are apt to show parenchymatous degeneration. Other organs show changes at times, but these are inconstant.

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## EVERY-DAY PROBLEMS IN INFANT FEEDING.*

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The every-day problems in infant feeding are many and complex, requiring careful study and observation of the individual infant. The necessity for a close watching of the feeding of infants, both while at the breast and when artificially fed, can not be too strongly emphasized.

While, as a general rule, it may be stated the ideal food is a healthy breast milk, this is not always the case, for not infrequently a mother has an abundant supply but secretes a milk which is unsuited to the needs of her own baby. These cases, however, are the exception, and it is infrequent that we find an unsuitable breast milk which can not be changed by suitable remedial measures, hence I can not refrain from saying a word against the unnatural mother who refuses to nurse her infant from purely selfish reasons, that she may have more time for society or pleasure. No physician should be a party to this or encourage it in any way, unless it can be plainly shown by most careful examination that the milk is unsuited and beyond remedial measures. The few cases I have seen during the past year, where the necessity for weaning has arisen early from unsurmountable reasons, have been enough to impress on me the unwisdom of voluntarily surrendering a good breast milk supply for the uncertainties of artificial feeding.

The mother of one of these children began to menstruate four weeks after her delivery. Immediately her baby, which was doing well previously, began vomiting and purging. The second month, with a similar occurrence, I was called to see the child in an exactly similar attack, and an examination of the breast milk showed it to be heavily loaded with colostrum corpuscles. The child was ill for several days, was weaned and has until the past two months been a constant care and anxiety, because of the difficulty in finding a suitable food for it.

During the first week a newborn baby frequently exhibits a temperature of 101, 102 or 103, which will be reduced on the advent of the mother's milk or after an artificial feeding. I have recently dismissed a case which showed a temperature of 104 on the fourth day. The mother, a multipara, had large, pendulous breasts, but the secretion of milk was very slow; not until the fifth day were the breasts at all full, and were at no time tense or engorged. A feeding of modified cow's milk, from two to four drams, after each nursing reduced the temperature to normal in two days. This condition, known as "starvation temperature" or "inanition fever" (Holt), is not generally recognized, and the recital of this case alone should be an incentive to have the temperature of all newborn babies taken at

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least twice daily during the first week after birth. In the presence of a temperature an artificial feeding of a modified cow's milk is indicated; it can do no harm even if there be another cause present for the rise, but it will generally be sufficient to cause a satisfactory and permanent reduction.

There may be an ample supply of a good milk, but the absence of a serviceable nipple may prevent the child's obtaining it. I have often seen this, and it is now my routine practice to make as early an examination of the breasts and nipples of a pregnant woman as possible, especially in primipara, in order to give instructions in the massage of flat and depressed nipples. By massage and training a very serviceable nipple can be made from an unpromising one if the treatment is begun early enough. The wearing of tight corsets or clothing should be advised against during pregnancy, but especially in the presence of flat or depressed nipples. A careful inquiry should also be made of multipara in regard to their lactation history, as having a bearing on the possibility of nursing the new baby.

An infant's progress may be watched by noting its weight, the presence or absence of vomiting, the stools, the time and amount of crying, but the most important, perhaps, all else being equal, is the weight. A newborn baby loses in weight during the first week, but by the end of the second week, or sooner, it should have regained its birth weight, and after this it should gain not less than four ounces a week.

A stationary weight or a loss after the second week; vomiting, not simply a slight regurgitation; colic; continuous crying; diarrhea, with green, mucous movements containing curds, should be an indication for a close investigation of the breast milk, the frequency and time of nursing and the daily routine of the baby's life.

I have had very satisfactory results from the employment of Holt's milk test for the clinical examination of breast milk, and have had good results in modifying breast milk to meet indications as shown by this test taken in connection with the symptoms presented by the child.

A high percentage of proteids is evidenced by colic, crying, with a doubling up of the legs, tense abdomen, green, mucous stools containing curds. This very often occurs while the mother is lying-in, but as soon as she gets up and is enabled to take the proper exercise, the increased proportion of proteids is generally decreased. Should this relatively high percentage of proteids with low percentage of fat persist, and the plentiful supply keep up, much help can be had from pumping or milking out the fore milk from the breast, the child being allowed to nurse only the middle milk and strippings. Taking the child from the breast before it has finished nursing and giving it a small quantity of barley water, previously dextrinized, from a bottle, will often relieve the colic, lessen the diarrhea and make the curds smaller.

Too much fat, which I have met but a few times, causes vomiting and diarrhea, with few or no curds in the movements. If too much fat is present there may be found in the stools small round masses which resemble curds very much, but are smooth and soft and not so white as curds.

A too small milk supply calls for active treatment. It is evidenced by a stationary weight or a loss in the weight of the infant; crying within a few minutes after leaving the breast and sucking vigorously on its fists after nursing. If the deficiency in supply is the only fault, it may frequently be increased by such galactogogues as nutrolactis or somatose, free drinking of milk, cocoa or chocolate and the cereal gruels. Alcoholic beverages are to be avoided, as they encourage the secretion of a milk with a deficiency in its life-giving properties and an increase in the watery element. If this does not correct the difficulty, the child should be put on a modified cow's milk, of suitable formula, in addition to the nursing, giving at first one or two drams to an infant of four weeks immediately after a breast feeding, gradually increasing the amount as indicated. This will generally suffice to obtain a satisfactory report as to its weight.

Holt's plan of having weekly reports sent on specially printed cards is to be commended. This report, which includes the babies' weight, stools, sleep, etc., enables him to watch the progress of those babies under his care and to put the proper interpretation on abnormal movements, restlessness or no gain or a loss in weight. In this way many babies could be saved perhaps serious attacks of bowel or digestive trouble by an early notification of abnormalities. Mothers are too prone to attribute digestive disturbances to teething, which, if promptly attended to, might prove of little moment; neglected, they might result seriously or fatally.

With a good milk supply, regularity of nursing, infrequent or no night nursing, a child will generally do well; a good supply with a disregard of these requisites will result, perhaps, in serious digestive derangements. Should a combined breast and artificial feeding be necessary, the one or two night feedings should be breast milk, if for no other reason than the convenience to the parents. The only objection to this is the possibility of the mother falling asleep and allowing the child to lie with the nipple in its mouth for several hours at a time.

A condition which may give rise to serious digestive disturbances is nursing from a cracked or fissured nipple. The milk is mixed with blood drawn from the crack, which results in an indigestion, vomiting, etc. Indeed, a fissured nipple may be so intractable as to prevent maternal nursing entirely.

We would advise against maternal nursing in a tuberculous mother, or one the subject of a serious puerperal infection. A suppurating mastitis is not a contraindication to nursing, as it is an exception for the abscess to invade a milk duct. Regular nursing is an assistance, rather than a detriment.

The problems, then, to be met in the supervision of breast feeding would be: 1. The increase of a too small supply. 2. Changing the character of the milk, (*a*) decreasing the proteids, (*b*) increasing the fat, (*c*) decreasing the fat. 3. To make serviceable nipples out of flat and depressed ones. 4. To supply an artificial or adjuvant food in case of a good but too small supply from the breast. 5. To continue nursing during a suppurating mastitis and retain the integrity of the gland after a subsidence of the inflammation.

The every-day problems of an entire artificial feeding are even more difficult of solution than those of breast feeding. It is not possible to have a set rule for guidance in all cases. Cow's milk for most cases is unquestionably best, but we frequently meet with cases in which no formula nor any method of home modification can be made to agree with the child.

It is my opinion that none of the artificial foods are suited for long administration to an infant. Sooner or later cow's milk must be given in some form to prevent the nutritional disorders which are certain to follow their long and exclusive administration.

In the choice of artificial foods, and no one food or one dilution or combination will agree with every child, those should be selected with which it is possible to combine milk in some proportion. Condensed milk in combination with some of the milk foods or a small percentage of cream can frequently be borne when other foods or combinations have failed. Without some such combination the results from an exclusive condensed milk feeding will be far from satisfactory. Condensed milk has much to commend it; it is one of the best foods for the poor and ignorant, is generally within their means, is easily kept sterile and is easily prepared. Its chief advantage lies in the small percentage of fat when the milk is diluted according to directions sufficiently to bring the percentage of proteids within the limits of digestion. Its long continuance results in such nutritional disorders as scorbutus and rachitis, and when the necessity arises for giving another milk it is difficult to change because of the taste acquired for the over-sweet condensed milk.

If a cow's milk is to be used, and it should be tried whenever possible, it is necessary for the physician to master the problems of percentage feeding and adopt some method of calculation of the prescription. There are a number of these by which very satisfactory results can be obtained at home.

He should be perfectly familiar with the supply of milk, its analysis, place and mode of production and process of handling, modification at home, care afterward, care of bottles and vessels used in the modification.

Minute and careful written instructions should be given regarding the feeding of an infant, and these should not be diverged from at all. Like the treatment of typhoid fever in a child, eternal vigilance is the price of success. Trust nothing to nature unaided.

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## INFANT FEEDING.*

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Both our common humanity and our public ec nomy demand that all preventable infantile mortality be speedily prevented. That many deaths are preventable by the successful employment of known methods of feeding is clearly proven. According to a noted English statistician the present mortality among infants of his country is as high as it was fifty years ago. This is probably too gloomy an aspect to take of the subject to do justice to the facts in the case. That this statement does not apply to the American people may at least afford a measure of personal gratification; but the demands of a still too large infant mortality on our profession are none the less urgent and perennial. These demands are made on the entire profession rather than on the pediatric specialist, for, while the latter stands forth more and more conspicuously the leader in thought and action, it is on the rank and file of the army, the general practitioners, that the hardest fighting inevitably falls.

It has been observed that the general practitioner, regarded from the view point of his labors, is the great pediatric specialist of his day, yet that in point of his knowledge, as a rule, he fails to deserve that distinction.

In the selection of a subject the writer chose "Infant Feeding" because of its important bearing on infant mortality. It is not the purpose to cover the subject, or even to take up in detail one or more phases of this subject, but rather to dwell on a few of the most salient points of the present interest with reference to recent progress and changes in the artificial feeding of infants.

It is interesting to note the growth of sentiment against artificial feeding, except as a final resort. The importance of allowing infants at least part breast feeding whenever this is possible, is now being emphasized more than ever. We are waking up to the fact that there is much erroneous belief in regard to the inability of mothers to suckle their offspring. These are capital evidences of progress. The beneficent influences of proper feeding on the infant, child and adult are a well-spring of life, and conversely, the pernicious effects of improper feeding on the tender little being as long as life continues are a relentless and irremediable source of disease. Such being the case, how befitting that at each annual convention much time is devoted to the consideration of this subject.

Progress in infant feeding heretofore has been lamentably slow, at times almost inconceivable, yet none the less positive and commendable. Unfortunately we learn much simply to be unlearned again by tedious deductions and eliminations. The importance we attached to artificial foods twenty years ago and that attached to condensed milk ten years ago are familiar examples.

The failure to rate morbidity second only to mortality in the estimation of food values in the feeding of infants is fruitful of incalculable evils. The laity judges of food value by two time-honored standards, one being negative and the other positive. The first is that the infant does not die, or conversely, "that it lives"; and the second that the infant thrives, or as commonly stated, "that it grows fat." The latter is always based on very superficial observation, and forms the kernel of the higher valued testimonials which manufacturers utilize in exploiting the virtues of artificial foods.

How easy the task for medical men to commit the same errors of judgment, adipose tissue being peculiarly deceptive in artificially fed infants. The mere fact that the infant lives and is growing fat easily makes an increasing morbidity which fatally exposes the infant to the first attack of one of the acute maladies.

The writer is not one to lay the death of every infant to the charge of the food employed in its behalf. The method of feeding may be alone at fault. Both over-feeding and under-feeding have their train of pernicious results properly classed as food disorders. These are frequently more or less obscure and generally but vaguely definable. Sterilized or pasteurized cow's milk and the various artificial foods of the market are fruitful sources of such results of improper food and faulty methods of feeding.

On the other hand, it must be admitted that many an apparently thrifty infant's death is in reality attributable to deeply-rooted results of improper nutrition.

This strictly modern subject of morbidity is receiving increasing attention. We have come to the time when methods to reduce mortality and methods to reduce morbidity must be considered side by side and conjointly. The American Pediatric Society did a noble work simply in calling specific attention of the medical world to this important subject about four years ago in a general inquiry into the prevalency of scurvy and rickets in artificially fed infants.

The tendency of to-day is to return to Nature's beneficent provisions and methods and to have more regard for the specific needs of the individual infant. We have learned to recognize in cow's milk Nature's abundant

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substitute for mother's milk. We want simplicity in food and method of preparation rather than complexity and artificiality.

We are ready to abandon wholesaling and turn our best attention to individualization. Wholesale sterilization or pasteurization is not much advocated in this, the twentieth century. Laboratory milk is not so much heard of now in the foreground of pediatric teachings. Sterilized or pasteurized milk is first class in specific instances and to meet special indications, but falls short of being the best at our command for all infants and all conditions.

The relative value of recognized methods of feeding infants as esteemed by leading pediatric specialists at home and abroad, in the writer's estimation, may be summed up in the following order:

1. Exclusive breast nursing.
2. Mixed feeding, the infant having the advantage of more or less breast milk daily whenever and so long as this is possible.
3. Cow's milk modified in the home, water, lime water or a simple demulcent being employed as a diluent.
4. Dispensary and commercially pasteurized milk.
5. Boiled top milk variously diluted to suit the infant's needs.
6. Whole cow's milk modified by admixture of one of the artificial foods.
7. Condensed milk and the several cereal and milk foods.

582 Federal Street.

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## INFANT DIGESTIVE DISTURBANCES.*

A. C. COTTON, A.M., M.D.
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Infancy and childhood are the periods of life in which digestive disorders are most prevalent and fatal. In children of all ages a transient form may occur at any season, with a decided predilection, however, for the heated term. In midwinter occasional attacks of more or less severe, although usually transient, diarrhea without fatal tendency are seen. It is in the three summer months that enteric disorders, with diarrhea as a common symptom, are most fatal. This clinical fact is so well recognized, indeed, that the term summer diarrhea has gained a prominent place in the nosology of early life.

The mortality among infants and children during the summer months from digestive disorders exceeds that from all other diseases during the same period. Comparative statistics show that the greatest susceptibility to summer diarrhea is found between the ages of 6 to 18 months, during which time the death rate from this cause is manifold that seen at any other age. The well-known mother's dread of the second summer is a clinical recognition of this fact.

The death rate seems to divide this subject into two classes, viz., early infancy and late infancy. It is a common clinical observation that the persistency of digestive disturbance, due to the introduction of an irritant, diminishes with the age of the child after two years. So that with increasing age there is a steady diminution in the severity of diarrheal disorders and a corresponding decrease in mortality from this cause.

The first class includes infants during the milk-feeding period up to about the middle of the second year, while the second includes infants from 18 to 36 months. After the latter age, severe attacks of diarrhea are so infrequent as rarely to require the attendance of a physician.

In these disorders the onset is sometimes sudden, ushered in by a convulsion, vomiting and diarrhea. There is usually high temperature, thirst and nausea which make the infant clutch at food, but push it quickly aside as soon as a few mouthfuls have been swallowed. Restlessness is nearly always present. The stools may change suddenly, or there may be an interval of two or three days of preceding departure from the normal in frequency and character. There may be a great deal of colicky pain.

The infant, while apparently in perfect health, may develop vomiting, the matter ejected being at first the contents of the stomach little changed, highly acid, or densely curdled, to be followed soon, however, by a watery mucoid and sometimes by bile-stained fluid, less acid or even alkaline in reaction. Diarrhea frequently accompanies and invariably follows the onset of the disturbance. The first dejections may be nearly normal, but quickly change, showing evidence of fermentation and later of putrefaction, finally becoming serous. The odor of the stool varies from the normal acid to intensely fecal and later to a sickening, musty smell. The infant, apparently well nourished and playful, quickly shows signs of systemic disturbance in fretful, peevish irritability and restlessness, with head rocking, anxious facies, persistent whining cry, pyrexia, dry mouth, softened, flabby tissues and atonic musculature. The depressed fontanelle, sunken, lusterless eyes, sharply defined temporals, drawn features, with the intense thirst give evidence of the great drain of fluids. The abdomen, at first tympanitic, may soon become flabby and depressed, and the extremities may be cold, although the rectal temperature shows from 103 to 106 degrees. Convulsions may usher in the attack, follow the initial vomiting by a few hours, appear only at the final stage or occasionally may not develop. Within twenty-four hours from the onset, and frequently earlier, the algid stage is reached, with pallor and cold superficies, although the internal temperature may be high. The restlessness changes to a sopor accompanied by hyperesthesia and irritability when disturbed, but rapidly subsides into semi-coma, with shallow breathing, collapsed veins, pulseless radials, half-closed, filmy eyes and terminates in death by convulsion or asthenia.

This picture presents symptoms of acute poisoning from the gastro-enteric tract, occurring in a state of apparent perfect health, with fatal termination in from 24 to 48 hours. Although the well-nourished infant is not exempt from this form of acute intoxication, it occurs with so much greater frequency among those who show evidence of malnutrition that the latter condition may well be considered a predisposing cause.

Fortunately, cholera infantum, as just presented, with its almost invariable fatal termination, is by no means common. As to its frequency, it is extremely interesting to note the varying opinions of the most competent observers. One eminent observer of wide experience in diseases of children, stated recently in a public address that he had seen only three cases of undoubted cholera infantum. Other writers of equal eminence speak of its occurrence as more common and claim occasional success for certain therapeutic measures adopted in certain cases. These widely different opinions as to the frequency and fatality of cholera infantum may be reconciled only on the ground that we

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have no common standard for the diagnosis of this grave disorder. The prevailing opinion seems to be that so-called cholera infantum is extremely rare and almost invariably fatal, and against which no therapeutic procedure has thus far proved efficient.

So far as antemortem clinical evidence goes, cholera infantum may be considered an intense form of acute gastroenteritis or a dyspeptic diarrhea plus some unknown intoxication.

Clinically, the line can not be sharply drawn between some cases of dyspeptic diarrhea and cholera infantum. It is within every clinician's experience that occasional cases presenting all the symptoms of so-called cholera infantum, from the sudden onset of vomiting to the serous diarrhea, seem to yield to treatment and ultimately recover. Who shall say that these were not cases of cholera infantum? Is there not a tendency to restrict that diagnosis to fatal cases only? Symptomatically the differentiation between the various forms of "summer complaint" can not be made. That bacteriology promises an early solution to some of these questions is believed by many, and the attention of the profession is turned with renewed interest to the special work of Booker, Flexner, Duval, Bassett and others in their investigation along this line.

The commonest form of summer diarrhea is so evidently the result of acute indigestion that some writers have classified it separately as the dyspeptic variety. This classification seems justifiable when we recall the frequent history of the ingestion of substances known to be inimical to normal digestion. In many other cases which give no record of dietetic error we are led to conclude by analogy of onset, symptoms and progress that perverted or disturbed digestion from causes not apparent may be responsible for a large proportion of summer diarrheas. It is the common experience of every physician to meet cases of sudden onset of vomiting and diarrhea, with temperature varying from slight elevation to a high degree of pyrexia, with or without *history* of improper feeding in which relief with absolute recovery follows the exhibition of one or more doses of castor oil and the withdrawal of food for 24 hours.

The diagnosis of diarrhea due to acute indigestion seems in the majority of cases to meet all the pathologic and therapeutic requirements. Unfortunately, however, in many instances, the simple treatment outlined above is not applied, or if applied, fails to secure the desired results, and the case develops a most obstinate form of gastrointestinal disturbance. There is continuation of pyrexia, with colicky pains, more or less flatulence, frequent dejections of foul, acid, greenish stools of varying consistency. The vomiting may cease, but the diarrhea persists with increasing tenesmus, the stools becoming mucoid, bloody or serous, and either fetid or odorless. From the common onset the resultant disorder may be named according to the area apparently most involved, as gastroenteritis, enterocolitis, ileocolitis or colitis with or without proctitis. It is amply in evidence that obstinate enteritis with or without anatomic change in the mucosa of the gut, or even membranous or ulcerative colitis, may be the last expression of an acute attack of indigestion in the infant.

The systemic disturbance which seems to be an expression of intoxication from the stomach and bowels varies widely as the disorder locates with greater or less intensity on this or that portion of the digestive tract. The early cessation of vomiting is frequently accompanied by the subsidence of pyrexia, with improvement in the general muscular tone. Apparently systemic disturbance diminishes proportionately with the distance from the stomach at which the burden of the disorder seems to fall. Thus, in most obstinate cases of colitis with extensive lesions of the mucosa, nutrition is frequently maintained to a remarkable degree, the child showing but little evidence of systemic intoxication, whereas a much less obstinate disorder of the small intestine may cause prostration with symptoms of general infection. In other words, the more active the digestive area involved the more profound the constitutional disturbance and the greater the tendency to prostration and collapse.

Of the complications of summer diarrhea, the most common in young infants is stomatitis from simple catarrhal to the obstinate ulcerative variety. It becomes serious as it interferes with the ingestion of food and increases the restlessness and discomfort. Its persistency adds to the gravity of the prognosis. This complication is most often seen where the gastric disturbance is marked, and its improvement is usually in direct ratio with the improvement in stomach digestion.

Cough and rapid respiration, so frequently seen in acute or subacute gastroenteric disorders, is usually indicative of broncho-pneumonia, which may or may not yield marked physical signs. That it selects the most dependent portion of the lung adds to this infection the dangers of mechanical hypostasis.

The quite frequent occurrence of albuminuria in patients with summer diarrhea has led some observers to attribute the convulsions to uremia and the occasional so-called idiopathic edema to nephritis. The conclusions, however, are rarely confirmed by the postmortem findings. Functional cardiovascular conditions with the anemia rapidly induced by the colliquative discharges appear a rational explanation for many of the cerebral phenomena and the edemas of dependent parts.

Lesions of the integument, from mere dryness or ordinary intertrigo to the various forms of urticaria, furunculosis and local necrosis, are met with most frequently in the subacute and chronic diarrheal disorders. Whatever the local treatment applied they yield only to the improved nutrition of convalescence.

A prolonged digestive disturbance rarely leaves the infant free from evidences of retarded development, which in many instances is never fully compensated. The picture of a two-year-old set back to the plane of a yearling, both as to digestive and motor functions, is a familiar one, and the attempt to adapt his hygiene to age instead of to condition is a common error.

Perhaps the most important effect of severe summer complaint on the survivors is the feeble resistance to infection from lowered vitality, so that the danger from intercurrent diseases is manifold. The special hygiene for these little convalescents is a subject too frequently dismissed with the doctor at the conclusion of the enteric disorder.

It is safe to say that the fatalities of summer diarrheas are seen very rarely among the exclusively breast-fed infants. They may starve to death from insufficient or impoverished breast milk, or dying from inherited dyscrasiæ they may show some of the symptoms of chronic indigestion. They may exhibit symptoms of acute or subacute digestive disturbance as a result of palpable errors in hygiene or they may be destroyed by some overwhelming intoxication, presumably due to sudden changes in the constitution of the breast milk, resultant from physical or mental disturbance in the nurse. In none of these instances is the symptom

diarrhea essentially a summer diarrhea. Moreover, it is a common observation that the diarrheas of the exclusively breast-fed are usually tractable, regardless of season, in otherwise healthy infants, by the application of the well-known principles of hygiene.

The startling mortality from digestive disorders is confined almost entirely to bottle-fed babies. This fact is so generally established that when pronounced diarrheal symptoms appear in an infant at the breast the first interrogations are directed towards the possibility of the ingestion of other material than breast milk. A careful study of the infant's hygiene, with examination of the dejecta after colonic flushings, frequently disproves the statement that the child's diet included nothing but breast milk. Statistics show that in the fatal cases of summer diarrhea less than 3 per cent. were exclusively breast fed. No clinical phase of this subject begins to rival in importance this one fact, that summer diarrhea, with rare exceptions, means practically summer artificial feeding.

In view of our knowledge of summer diarrhea the question of feeding, then, is of paramount importance. A neglect to use every means to secure for the infant natural food can not be atoned for by the most energetic therapy yet devised. Many of the obstacles to natural feeding are insuperable or even formidable only so long as the lay mind is asleep to the fact that his physician knows how to prevent fatal digestive disorders in the infant. When the responsibility for the consignment of a baby to a method of feeding that diminishes his chances of living two-fold more than inoculation with smallpox virus is fully brought home to the physician the difficulties of breast feeding will become proportionately insignificant. The fact that some governments and municipalities now require on the infant's death certificate a statement as to the method of feeding shows an awakening to the importance of this matter. How long before the same line of inquiry shall require an explanation as to why the infant was subjected to the manifold dangers of artificial feeding?

It has long been claimed, partly from inference and latterly as a result of milk examinations, that breast milk is not constant in its composition, but varies normally, not only in the total amount of solids, but also in their relative percentages. The admirable work of many milk analysts, especially that of the Adriances, shows some of these variations in solids during the entire period of lactation in quite a large number of recorded cases. So far as I can learn, however, no extensive record has been kept as to the influences of season on the various constituents of the mammary secretion. From my own observation I am confident that careful work will show diminution in the solids of high caloric value during the hottest weather.

A fact which admits of no discussion is this, that dietetic changes to meet the varying thermic conditions of climate and season are essential to normal metabolism in older children. Under what age this physiologic law is inoperative the most exacting artificial percentage feeders have neglected to state. Beginning with as low solids in their synthetic imitation of mother's milk as will sustain life, the rule is to increase gradually all the solids until an approximation of breast milk percentage is attained—the advancing age of the infant requiring a daily increase in the total quantity ingested. Whether from May to September or from October to January, whether in Florida or in Manitoba, the artificial emulsion must be pushed with increasing age. The sweltering infant's cry of thirst is inexorably met with the bottled emulsion of higher proteids and hydrocarbons until the overtaxed digestion suddenly fails. Fermentation and putrefaction follow with acute intoxication and much speculation as to the etiologic rôle played by the organism of Shiga.

Under such dietary regimen of unnatural foods, unnaturally administered, we cease to wonder at the high death rate of bottle-fed babies in hot weather.

When a tithe of the work that has been expended to cheat the babe and mother out of their mutual rights by the substitution of artificial methods of feeding, shall have been devoted to the problem of lactation, its physiology and its pathology, then will the morbidity and mortality of the suckling cease to be the opprobrium of the medical profession and the Shiga bacillus, with its pathogenic congeners, may be relegated to the background.

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## SUGGESTIONS FOR REDUCING THE PREVALENCE OF SUMMER DIARRHEA IN INFANTS.*

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Summer diarrhea is caused by the entrance into the system, usually through some food medium, of a virulent poison, which is the product of micro-organisms.

The symptoms in a given number of cases of summer diarrhea will vary enough to enable one to recognize, aside from degrees, several forms of the disorder.

The nature of the infection—whether it was poisonous products already formed outside the body or whether it was bacteria as such that entered the gastro-intestinal tract—has been offered in explanation of this variation in symptoms. But since, thus far, there has been no single form of bacteria separated as being specifically responsible, it is possible that the nature of the organism itself has something to do with shaping symptoms.

However, what uncertainty exists as to the cause of the several forms of the disease does not make less absolute the conviction in the minds of bacteriologists that summer diarrhea is the result of bacterial infection and that whatever other factors are concerned are not causes *per se,* but are only conditions most favorable to the development of the bacteria and to the production of their poisons.

It was by accepting this view that Kerley[1] was able to prove so brilliantly the curable nature of the disease.

But summer diarrhea is better than curable—it is preventable. If a child is fed on a food containing neither poison nor organisms capable of producing poison that child will not be poisoned!

We witness, however, an annual recurrence of this disorder and in such prevalence as to show that we have thus far accomplished but little in the way of prevention. This unsatisfactory result is easily accountable.

First, because there is a large percentage of practitioners still believing that heat and humidity alone and without the presence of a single bacterium are capable of producing the disease.[2] This view precludes any acceptance of its preventable nature. Consequently, a large

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1. Kerley: "Treatment of Summer Diarrhea in Infants." New York Medical News, Aug. 4, 1900.

2. Editorial: "Summer Diarrheas in Children." THE JOURNAL A. M. A., July 4, 1902.

percentage of the medical body has shown no inclination to co-operate with those especially interested in carrying out prophylactic measures.

Beside, there is involved in the subject of prophylaxis itself a complexity and a multiplicity of questions that have been discouraging to the accomplishment of appreciable results. Once we undertake to force the right of every child to receive nothing but a clean unpoisoned food we find ourselves entangled "in embarrassing questions of home sanitation and of personal hygiene and in graver questions of state medicine and of public charities."

Another factor, which has offset any results in the way of general prophylaxis, is found in the increase in the number of children being artificially fed. The artificial foods are the ones most likely to be contaminated and the artificially-fed infant offers the least resistance to bacterial poisoning.

Realizing, then, the main difficulties confronting us, can we overcome them?

Since the whole question, complex as it may seem, resolves itself into one of education, it seems to the writer that these disorders ought no longer to be accepted as inevitable.

The persistent pushing of the infectious nature of summer diarrhea at every available opportunity by every member of the profession who believes in it, and especially by every member of this Section who believes in it, will soon have the profession at large educated up to the point of acceptance. Let the bacterial origin of the disease be taught in our schools, stressed in our societies and our journals, and there will soon be found as few retaining the old ideas relative to the cause of summer diarrhea as there are now still holding to the old ideas of the cause of puerperal septicemia.

### MODE OF ENTRANCE OF BACTERIA.

The food of the ordinary infant is milk. Unfortunately milk is one of the happiest of media for bacteria. Breast milk is not infrequently contaminated through careless and uncleanly habits of the mother. Therefore, we find that summer diarrheas are not confined entirely to bottle-fed babies. But owing to carelessness in dairy methods, in its transportation and in its handling, cow's milk is much more apt to be contaminated with enough of adventitious matter to make it swarm with microorganisms. Notwithstanding, I meet doctors prescribing milk formulæ who do not even take the trouble to ascertain the name of the dairy furnishing the milk from which their formulæ are to be made. In a community above the average in the intelligence of its medical men, I find the utmost indifference as regards the milk supply. To a large body of the profession milk is milk. Our duty here is clear, namely, to teach these men that some milk is milk and that some milk is—poison!

### PERSONAL INSPECTIONS OF DAIRIES.

The result of this teaching will be more general inspections and investigations of dairies by physicians. The physician, who possesses any degree of progressiveness or any regard for the welfare of his patients, will come to appreciate the advantage of being able to recommend dairies which are reasonably certain to supply clean milk. This is a commercial age, and dairymen, without being necessarily dishonest, are governed by commercial motives. There can be no greater stimulus for getting dairymen to exercise care and thought in an endeavor to supply an uncontaminated milk of good quality than the knowledge that what they give will be known and that their prices and patronage will be governed somewhat by the quality of milk furnished.

### MILK COMMISSIONS.

Even should there exist among medical men a widespread desire to raise the milk standard, except for those physicians living in towns where the milk is furnished directly to the consumer by the dairyman, the visiting of dairies and the inspection of conditions thereon would be found to be impossible. In large cities milk is furnished by dealers after it has been collected from many farms and from varying distances. For the individual physician to inspect the source of such a supply is clearly impractical. This difficulty has already been partly met in some few cities by the establishment of what are known as milk commissions.

The objects, methods and personnel of such a commission, briefly stated, are about as follows:

The commission assumes the responsibility of ascertaining and of recommending dairies and dealers which can be depended on to furnish clean milk. On request, any dairyman or dealer is furnished with explicit instructions as to how he may bring his dairy or depot and its product up to the requirements of the standard set by the commission. Should he become a candidate for the certificate of recommendation furnished by the commission, his farm in the one case or his milk depot with its source of supply in the other, is inspected and the certificate granted or refused, according to the findings. Any certified dairy is open to as many inspections and without previous notice, as the commission may see fit to make. The commission withholds the right to withdraw any certificate issued.

Beside members, whose duties are purely executive or clerical, the commission is usually composed of four experts: (1) A veterinarian, who examines the cattle and all matters pertaining to their health, care and management; (2) a physician, who examines all persons connected with the dairy in relation to their habits of cleanliness as well as for transmissible diseases; (3) a bacteriologist, who examines the milk to test the efficiency of the measures in force for excluding bacteria, and (4) a chemist, who examines the milk as to its composition and for adulteration.[3]

### WHERE MILK COMMISSIONS HAVE FAILED.

These commissions have accomplished enough to prove their practicability and to encourage those interested to further endeavor, but their results have not been in proportion to the unselfish efforts that have been expended. This disappointing feature is due to a lack of appreciation and of co-operation on the part of the general profession. The men interested in such commissions are too often regarded as enthusiastic cranks possessed of a hobby! They even fail to gain the undivided support of those directly concerned with the question of infant feeding. A partial canvass by the writer of the nurseries and babies' hospitals in one of the cities having a milk commission, resulted in the finding that not a few of these institutions were employing milk other than that recommended by the commission.

I believe this failure of the profession at large to take early advantage of the benefits offered by the milk commission to be due in part to the sectional workings of the medical societies of large cities. It is only the most energetic and progressive man in such societies who is

3. For fuller description of milk commissions see reprint from seventeenth annual report of Bureau of Animal Industry (1900), entitled "Market Milk: A Plan for Its Improvement," by R. A. Pearson, M.S. I have made free use of Mr. Pearson's description in this article.

acquainted with the advances being made in sections other than the one in which he finds himself peculiarly interested. I would suggest, then, to the pediatric sections of these societies that in order to gain a fuller appreciation of what they have done toward solving the milk problem they must not only invite an acceptance, but they must force it. Send men capable of presenting the subject clearly into the other sections to beg for cooperation. Let the milk commission itself send to every physician in its radius a statement of its methods and objects, and let this be accompanied by a circular letter asking the physician addressed to further its purposes by his encouragement.

If the commissions already existing can gain the cooperation to which they are entitled they will be able to prove such signal service to their communities that they will be emulated over the entire country and springing up around such commissions will be found the coveted model dairies.

### STERILIZATION AND PASTEURIZATION.

Several methods of killing the bacteria in milk have been suggested. But aside from any objectionable features resulting from the continued use of a milk that has undergone sterilization or pasteurization, such processes are uncertain and have the additional objection of being compromises with filth. A milk coming from the dairy free of disgusting and poisonous contamination ought to be as much more acceptable to the mind of the physician as it is to the digestive apparatus of the infant.

### CONTAMINATION IN THE HOME.

Foul milk does not always denote an illy conducted dairy. From my opportunities of observation I have come to believe that milk is subjected to almost as many contaminating influences after delivery as it might have been in its source. In the homes of the well-to-do this happens by giving the care of the milk into the hands of ignorant servants. The physician should guard against this by advising the mother of the necessity for her personal supervision. But this condition is more applicable to the homes of the poor, and more especially to the homes of the city poor.

### SUMMER DIARRHEA IN THE TENEMENTS.

The habitat by choice of summer diarrhea is the tenement house. It is here that every condition is favorable, and it is here that we are forced to compromise with conditions as they exist. But, than what has been done, can we do nothing more energetic, more practical and more benevolent to save the child of the tenement? We can not reach into such places from behind our desks in the dispensaries. We can not reach into such places by taking the mothers and their sick babies for a day's excursion on the river or into the country. These have been tried, and each year brings back the same anxious train of dirty mothers with their sick and dirtier babies. The dispensaries and hospital boats are worthy institutions deserving of support, but they are not enough.

### PAMPHLET EDUCATION OF THE POOR.

I know of no better way to carry the light of hygiene and sanitation into the tenements than to carry it there.

If the boards of health were to compile a set of practical, explicitly worded and easily intelligible rules for the care of infants during the hot season; if these were to be printed in the four common languages of tenement, Yiddish, French, German and English, and published in pamphlet form; if a pamphlet of this kind were to be given a wide distribution in the homes of the poor, I believe much could be accomplished in the way of hygienic education and of prophylaxis.

As the poor possesses an inquisitive mind, so far as it is practical, reasons should accompany the rules embodied in such a pamphlet.

The question of distribution may offer some perplexity. Last year an admirable set of rules for the management of infants in summer was published by the board of health in one of our cities.[4] I was not made acquainted with the plan of distribution here, but from an announcement in the secular press I judged that those who did not apply for them were not furnished with these printed rules. If this was its extent the distribution could not have been very successful, either in its breadth or in its results. The idea may have been to enhance the value of the pamphlet by putting its owner to some slight inconvenience in securing it. But I believe the same effect may be obtained in a better way.

If such pamphlets were carried into the homes of the poor, and if each mother into whose hand a pamphlet is placed were given to understand that at a subsequent time a physician would visit her home to see if the measures advised were being observed, I believe more appreciable results would follow.

From the medical schools in these cities on which the tenement evil has engrafted itself a corps of students from the upper classes might be organized to carry on this work. Many of the students would be glad to accept an opportunity of thus profitably employing the summer months and of an early identification with their profession. As a further inducement, such students as would enlist should be given credit and mention by their schools for any written observations on their work. If the ranks are still unfilled the post-graduate schools could supply enough men to make up the deficiency.

Such a corps of workers should be under the direction of the hospital dispensaries and clinics. To make the project a success there should be an agreement and an understanding as to the division of the work.

After the distribution of the printed rules the corps of outdoor workers should be allowed the privilege of treating cases of summer diarrhea among the children of the poor of which they may become advised. The first treatment might be given at the dispensary and the case then followed into its home by the assistant on the corps of outdoor workers to see if the measures advised at the dispensary are being carried out and to give any additional treatment that seems necessary.

I realize that this is but an illy defined and roughly outlined plan, but it is only offered as a suggestion in the hope that it may be given further thought and consideration.

### BOTTLE FEEDING.

Among the conditions hindering the reduction in the number of victims to summer diarrhea I have alluded to the increased number of infants being artificially fed. This condition I believe is not to hold.

At the last meeting of this Section the opinion was freely expressed by some of the attendants that endeavors to perfect milk modification had not only proven disappointing, but had resulted in an actual curse. If this opinion does not prevail its influence at least has been felt.

Milk modifiers have begun to show moderation in their claims; the confident tone of their papers heretofore is somewhat less characteristic. They have begun to spend

4. "Rules for the Management of Infants During the Summer Months," compiled by the Obstetrical Society and approved by the Philadelphia Board of Health, 1902.

more time in seeking for a necessity to justify the substitution of prepared food for breast milk.

That such a necessity does not exist as often as those who have been eager to demonstrate their ability to rival Nature would have had us believe, was impressed on me by a paper read before this Section last year.[5] Anyone likewise impressed and to the point of trying the measures therein advised, I believe, is now ready to assert that breast milk in a great many cases can be conserved, its quality improved and its supply increased, and that the number of bottle-fed infants can be reduced.

[*This Symposium on Infant Feeding and Digestive Disturbances will be concluded next week by the papers of Drs. Davis, Brush, Parke and Mastin and the discussion on the nine papers.*]

## FRUIT VESSELS, MOSQUITOES AND YELLOW FEVER.*

EDMOND SOUCHON, M.D.
PRESIDENT OF THE LOUISIANA STATE BOARD OF HEALTH.
NEW ORLEANS.

The subjects which are about to engage our attention have been under investigation for many months. They comprise the following points: 1. The scarcity of *Stegomyia fasciata* on non-infected fruit vessels from ports quarantined against yellow fever. 2. The scarcity of cases of yellow fever on fruit vessels from ports quarantined against yellow fever. 3. The impunity of intercourse with fruit vessels at the city wharf before the holds are fumigated. 4. The *Stegomyia fasciata* on non-infected fruit vessels from ports quarantined against yellow fever are not infected. 5. The improbability of stegomyia on infected fruit vessels becoming infected before arriving at the quarantine station. 6. The impossibility of mosquitoes on infected fruit vessls to carry yellow fever to the city before the arrival of the vessel at the city wharf. 7. The cases of yellow fever found on fruit vessels were infected ashore.

### I.—SCARCITY OF STEGOMYIA FASCIATA ON FRUIT VESSELS FROM PORTS QUARANTINED AGAINST YELLOW FEVER.

During the quarantine season of 1902 fruit vessels plying between New Orleans and the fruit ports of Central America carried marine medical inspectors, who were instructed to capture on each vessel a few mosquitoes on every trip, in order to determine the kind of mosquitoes found on board of these vessels. There were 12 fruit vessels carrying marine medical inspectors, and they made during the quarantine season about 180 trips in round figures.

The marine medical inspectors captured 208 mosquitoes on board of the vessels during that period.

The mosquitoes were sent to the Division of Entomology in Washington, and were examined by the director of the division, Mr. L. O. Howard. It is to his courtesy and kindness that we are indebted for the valuable information that follows. The report below was received from Mr. Howard Dec. 8, 1902:

The first examination of your mosquitoes has been completed and the result follows:

Port Barrios, ashore in houses, 3 specimens of *Stegomyia fasciata*, 84 in houses.

Port Limon, on board vessels, 2 specimens of *S. fasciata*, 62 other specimens.

On board vessels, mail route, P. Barrios P. Cortez, 1 specimen of *S. fasciata*, 48 other specimens.

Havana, on board of vessels, 10 specimens of *S. fasciata*, 61 other specimens.

Bocas Del Toro, ashore in houses, 21 specimens of *S. fasciata*, 2 specimens of others.

Belize, ashore in houses, 15 specimens of *S. fasciata*, 10 other specimens.

Cuba, ashore (no locality given) 2 specimens of *S. fasciata*, 3 specimens of anopheles.

Port Limon, in houses, 9 specimens of *S. fasciata*, 32 other specimens.

Bluefields, in houses, 4 specimens of *S. fasciata*, 49 other specimens.

Bluefields, on board of vessels, 2 specimens of *S. fasciata*, 93 other specimens.

Livingston, ashore in houses, 24 specimens of *S. fasciata*, 6 other specimens.

Port Cortez, ashore in houses, 42 specimens of *S. fasciata*, 7 other specimens.

Directing our attention specially to the mosquitoes captured on board of the fruit vessels we find that on the vessels on the mail routes comprising Port Barrios, Port Cortez and Belize 49 mosquitoes were caught, of which 1 was stegomyia and the other 48 of another kind; that the vessels from Port Limon furnished 64 mosquitoes, of which 2 were stegomyia and the 62 others of another kind; that the vessels from Bluefields furnished 95 mosquitoes, 2 of which were stegomyia and the 93 others of another kind. In résumé, 208 mosquitoes were caught on board of the fruit vessels, of which only 5 were stegomyia, that is, less than 2.5 per cent.

This number, 208, is remarkably small considering the number of vessels, of inspectors and of round trips; that is because mosquitoes are not present on all vessels and are in no great numbers when present, and therefore not very easy to find and capture. The percentage of stegomyia is remarkably small because the stegomyia is especially a house mosquito. We will see further that in the houses the percentage of stegomyia is 40 per cent.

The percentage of stegomyia found on fruit vessels is as follows: Port Limon, 3 per cent.; Bluefields, 2⅛ per cent.; Barrios, 2 per cent.; Cortez, 2 per cent.; Belize, 2 per cent.

It would be important to determine the percentage of the males among the 208 stegomyiæ caught on fruit vessels. Mr. Howard's attention was called to the fact too late to ascertain this positively, as his assistant had thrown the mosquitoes away after the first examination, but Mr. Howard states in his letter that the females were enormously in the majority.

The fruit vessels plying between Havana and New Orleans during the quarantine season of 1902 furnished 71 mosquitoes, of which 10 were stegomyia and the others of another kind, i. e., 16 per cent.

### II.—SCARCITY OF CASES OF YELLOW FEVER ON FRUIT VESSELS FROM FRUIT PORTS QUARANTINED AGAINST YELLOW FEVER.

It was about fifteen years ago, in 1886, that the importation of fruit from the tropical ports to New Orleans really began. The main regulation was that no vessel should have any communication with the shore. During that time an average of seven vessels a year were engaged in that trade. Each vessel made an average of two trips monthly during the quarantine season; that is, during six months. There were, therefore, eighty-four trips per year, and during the fifteen years 1,260 trips or vessels. During these fifteen years five fruit vessels arrived at the Mississippi River Quarantine Station with yellow fever on board *during the quarantine season*. They were:

1887—City of Dallas, from Belize, July 6, one case.
1888—Foxhall, from Limon, August 14, one case.
1889—City of Dallas, from Livingston, October 1, one case.
1897—Jarl, from Bocas, October 27, one case at Quarantine and two in the city.
1900—Adler, from Limon, August 26, one case.

All these ports had yellow fever in those years. The percentage of vessels with yellow fever on board is about one-third of 1 per cent.

5. "The Improvement of Breast Milk and Prolongation of Lactation," Thomas S. Southworth, New York. THE JOURNAL A. M. A., Aug. 2, 1902.

* Read before the Louisiana State Medical Society, New Orleans, April 28-30, 1903.

The records show that of the five cases two were passengers, the case of 1887 from Belize and the one of 1889 from Livingston; therefore, they came from ashore. One case, the case of 1900, from Limon, was the captain of the vessel, who is permitted to go ashore to enter and clear his vessel. The fourth case, that from Bocas, occurred in 1897, when there was yellow fever in New Orleans and in Bocas, and the quarantine regulations relaxed on that account. The last case, that of 1888, from Limon, was one of the crew, and is the only one that can not be traced to infection ashore. However, it is our belief that the man violated the quarantine regulations and did go ashore.

### III.—IMPUNITY OF INTERCOURSE WITH NON-INFECTED FRUIT VESSELS AT THE CITY WHARF BEFORE THE FUMIGATION OF HOLDS.

From 1886 until 1895, both years included, not a case of yellow fever originated in New Orleans, and yet, during these ten years nearly 1,000 fruit vessels came to the wharfs; some 50 laborers were permitted to freely board each fruit vessel for a time of about five hours, which is required to unload a fruit vessel. These laborers, of course, came in contact with the bunches of bananas and many went into the holds of the vessels. It is only after all this exposure that the holds of the fruit vessels were fumigated.

### IV.—THE STEGOMYIA FASCIATA ON NON-INFECTED FRUIT VESSELS ARE NOT INFECTED.

It would be most important to determine whether or not stegomyias on fruit vessels are infected. The only proper way would be to experiment with them after the Reed method. However, that they are not infected is proven by the foregoing facts: 1. That in 15 years there was really but one case of yellow fever stopped at the quarantine station during the quarantine season that could not be traced directly to the shore. 2. That in spite of the free intercourse of laborers with the fruit vessels before fumigation, above mentioned, not one case of yellow fever originated in New Orleans in ten years. In other words, during these ten years nearly 50,000 laborers came in contact for five hours with mosquitoes before the fumigation of the holds and yet not a case of yellow fever occurred in New Orleans. This was because the mosquitoes were not infected.

We should also bear in mind that during these ten years a large number of these vessels came from ports infected, especially Limon, from which come more vessels than from any other port.

#### EPIDEMICS OF YELLOW FEVER IN THE CENTRAL AMERICAN FRUIT PORTS, AS SHOWN FROM ANNUAL REPORTS, QUARANTINE REPORTS AND BOARD OF HEALTH MINUTES.

Belize—
1860—Epidemic.
1869—Epidemic.
1874—One case reported.
1886—Epidemic.
1887—A number of cases reported. (See Dr. Wunderlich's report, Board of Health Minutes, Sept. 22, 1887.)
1890—Prevalent as early as March. (Minutes March 17, April 15, July 10.)
1891—Reported in July. (Minutes July 16.)

Livingston—
1887—Reported. (Minutes Sept. 22.)
1889—Reported. (Minutes July 16.)
1892—In April. (Minutes April 25.)

Port Cortez—
1870—One case from Port Cortez brought to Quarantine on S. S. *Agnes*. (Board of Health Reports, 1888-1889.)
1892—Prevails. (Minutes May 12.)

Ruatan—
1888—Prevalent in July. (Minutes July 19.)

Port Limon—
1888—The S. S. *Foxhall* brought one case to Quarantine in August. (Quarantine Records.)
1889—The S. S. *Phœnix* brought one case in February to Quarantine. (Quarantine Records.)
1890—Prevailing in April. (Minutes April 15, July 10.)
1893—Reported in May. (Minutes of June 6.)
1897—Reported in August. (Minutes of August 12 and 26.)
1898—Reported in June.
1899—Reported in August.
1900—Reported in April.
1901—Reported in July.
1902—Reported in April.

Bocas del Toro—
1893—Dr. d'Estrampes reported died of yellow fever.
1897—Reported in August. (Minutes August 12 and 26.)
1900—Reported in July.
1901—Reported in June.

### V.—IMPROBABILITY OF STEGOMYIA ON INFECTED FRUIT VESSELS BECOMING INFECTED BEFORE ARRIVAL AT THE QUARANTINE STATION.

As to the agency of the *Stegomyia fasciata* on board of infected fruit vessels, it is reasonable to conclude that although it is greater than on non-infected vessels, since there is a case on board which they may bite, become infected and transmit the disease, yet this agency is truly very little considering: 1. That the percentage is small, 2½ per cent. 2. That the females must be impregnated before they will bite. 3. That the males are in a very small number on board. 4. That the females must bite the patient within the first three days. 5. That they can not infect a human being until twelve days thereafter. 6. That the female, after one biting, does not appear to bite a second time till about five or seven days have elapsed. 7. That mosquitoes do not breed in bilge water nor in sea water. 8. That the bitten subject must be a non-immune. 9. That the cases on record are all primary cases, nothing indicating that they were secondary cases.

Such small percentage of 2½ per cent. of the stegomyia can not be said to be entitled to much consideration. Dr. Havard says, in the Journal of the Sanitary Department of Havana, Cuba, 1902:

> During the epidemic of yellow fever in 1900 in Havana, none of the many non-immune nurses and employes of the Las Animas Yellow Fever Hospital contracted the disease, although at that time the mosquitoes were common and no particular care was taken to protect patients from the bites. This immunity was explained when after a thorough fumigation, all the dead mosquitoes were examined by Dr. Guiteras and an exceedingly small proportion of them found to be stegomyia.

### VI.—IMPOSSIBILITY OF MOSQUITOES ON INFECTED FRUIT VESSELS TO CARRY YELLOW FEVER TO THE CITY.

It is impossible for any mosquito on an infected fruit vessel to carry yellow fever in the city because fruit vessels are not more than six days in transit before reaching the quarantine station, and that all suspected and infected vessels specially go there through a thorough disinfection, which destroys all the mosquitoes by sulphur fumes before the twelve days have expired.

### VII.—THE CASES OF YELLOW FEVER FOUND ON FRUIT VESSELS WERE INFECTED ASHORE.

This is proven by the fact that almost all the known cases had had communication with the shore, with one exception, and I do believe that one had violated the quarantine regulations and had gone ashore.

These views are confirmed when we see the great percentage of stegomyia in the houses, 40 per cent., without mentioning the possible agency of fomites.

Reed and Carroll, in their article on the Prevention of Yellow Fever in the *Medical Record*, Oct. 26, 1901, say: "The possibility of infected mosquitoes reaching a vessel either by flight or by means of lighters may be considered as highly improbable." They say also further: "In our opinion, however, the chances of infection of a vessel by contaminated mosquitoes coming aboard from a house or a ship in close proximity are very slight."

The remarks which follow show plainly the influence of communication with the shore in causing infection.

A list of mosquitoes caught in the houses at the fruit ports quarantined against yellow fever:

| | Total Mosq. | Stegomyia. | Other Kinds. |
|---|---|---|---|
| Belize | 25 | 15 | 10 |
| Livingston | 30 | 24 | 6 |
| Port Cortez | 49 | 42 | 7 |
| Port Barrios | 87 | 3 | 84 |
| Bluefields | 53 | 4 | 49 |
| Port Limon | 41 | 9 | 32 |
| Bocas del Toro | 23 | 21 | 10 |

Altogether there were 308 mosquitoes caught in houses, of which 118 were stegomyia, i. e., 40 per cent.

The ports where houses furnished the greatest number of stegomyias rank as follows:

Belize, 60 per cent.; Livingston, 80 per cent.; Port Cortez, 86 per cent.; Port Barrios, 3 1-3 per cent.; Bluefields, 7½ per cent.; Port Limon, 22 per cent.; Bocas del Toro, 91 1-3 per cent.

This table of the percentage of stegomyia caught on shore in the houses confirms also the conclusion that infection of fruit vessels at quarantined ports is contracted ashore, in the houses, and that the immunity of the fruit vessels is due to the fact that they are not granted the privilege of the shore during the quarantine season.

The following is the list of the species of mosquitoes found at the Mississippi River Quarantine Station:

| | |
|---|---|
| Anopheles maculipennis Meign | 4 specimens. |
| Anopheles crucians, Weid | 2 specimens. |
| Culex perturbans, Walker | 4 specimens. |
| Culex sollicitans, Walker | 22 specimens. |
| Culex pipiens, Linne | 2 specimens. |
| Stegomyia fasciata, Fabr | 3 specimens. |

The percentage of the *Stegomyia fasciata* is about 9 per cent.

During the same fifteen years of fruit traffic 1,343 vessels plying between New Orleans and the West Indies, Central American and Mexican ports, arrived at the quarantine station. The vessels belonged to the Harrison Line and to the Leyland Line of regular steamers, whose agents kindly furnished the figures.

Besides these it is estimated that about 250 irregular vessels arrived also at the quarantine station, making a total of 1,600 vessels in round figures. Of these, 29 were stopped during the quarantine season with yellow fever on board at the Mississippi River Quarantine Station. Of course, no measures were taken then against mosquitoes in the case of these vessels, nor of the fruit vessels, but the crews of fruit vessels were not permitted to go ashore, whereas on other vessels they were.

It is remarkable that the vessels which took measures to prevent communication of the crew with the shore presented so few cases, whereas those which took no such measures presented comparatively so many, 29 cases in 1,600 vessels.

## APPENDIX.

### COMPLEMENTARY REMARKS REGARDING THE TRANSPORTATION OF MOSQUITOES BY VESSELS.

The observations of the marine medical inspectors during the last quarantine season regarding the presence of mosquitoes on board of fruit vessels have confirmed the statements made by me in the article published in the *New York Medical Record,* July 5, 1902, "The Transportation of Mosquitoes by Vessels," i. e., that some vessels had no mosquitoes; that most of them had mosquitoes on board, but that after the second day out they disappeared, specially if there was a strong wind blowing; that in the protected parts of the vessel mosquitoes have been found many times; that mosquitoes may be carried from the home port to the fruit ports.

One hundred and eleven reports were received during the last quarantine season. They are as follows:

| | Reports. | Yeas. | Nays. |
|---|---|---|---|
| Belize, Pt. Barrios and Pt. Cortez Route | 12 | 9 | 3 |
| Port Cortez | 9 | 18 | 1 |
| Bluefields | 18 | 8 | 10 |
| Port Limon | 42 | 18 | 24 |
| Bocas del Toro | 16 | 2 | 14 |
| Havana | 26 | 25 | 1 |

Total percentage of yeas is about 55 per cent., distributed as follows:

| | Per Cent. | | Per Cent. |
|---|---|---|---|
| Belize | 71 | Port Limon | 42 |
| Port Cortez | 88 | Bocas del Toro | 12 |
| Bluefields | 42 | Havana | 96 |

### REMARKS CONCERNING THE TRANSPORTATION OF MOSQUITOES IN BAGGAGE.

With the assistance of Dr. S. G. Gill, the shipping inspector of the Louisiana State Board of Health, I carried on some experiments on these lines. The results confirmed the conclusions of Dr. Grubbs (see Yellow Fever Institutes, March, 1902) that without water or moisture mosquitoes in baggage will not live more than three to five days in the summer months.

### REMARKS CONCERNING THE SCARCITY OF MOSQUITOES IN BAGGAGE.

Surgeon Havard of the U. S. Army, in a letter to the *New York Medical Record,* cites the experience of Dr. L. S. Harvey, U. S. A., who reported that he accidentally carried mosquitoes in his chest from Baracoa, Cuba, to Washington. There is thus afforded positive evidence that mosquitoes are transported in baggage, yet this occurrence must be truly rare.

In a letter to the writer, Dr. John N. Thomas, the efficient resident physician of the Mississippi River Quarantine Station, says: "At your suggestion I have personally experimented five times to determine the liability of mosquitoes being caught and held in baggage while packing same in rooms where mosquitoes were numerous, and I have not found any mosquitoes in such baggage when unpacked. I believe that this factor is one of such extreme improbability that we may safely leave it out of account."

Regarding the transportation of mosquitoes in baggage, Reed and Carroll say (*Medical Record,* Oct. 26, 1901): "The fear that has been entertained that infected insects may be imported in boxes or trunks, we believe to be absolutely groundless, and this for the simple reason, as shown by numerous observations made by us, that mosquitoes, when deprived of water, die within a few days."

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**From Kentucky.**—The *Louisville Monthly Journal of Medicine and Surgery* says: The American Medical Association concluded a most successful meeting on May 8 from both a scientific and business standpoint. The House of Delegates is a hard-worked body—partly because of its size—thus delaying business. With the reapportionment of the state associations on the basis of one delegate to each 1,000 members and the already decreased representation of the sections, one to each—the work should be dispatched with more ease and at less sacrifice on the delegates; certainly not more than three hours a day should be required. The arrangement for section work is much better than ever before. Nothing interferes with it—the orations are at night and no General Meetings in the morning. In consequence of this all of the sections showed an increased attendance over previous sessions. The election on the last morning showed the futility of trying to eliminate the political element from these meetings, but demonstrated the wisdom of removing it from the floor of a General Meeting. It also demonstrated that it is more difficult for a few politicians to control the vote of the house.

# THE WEIGHT WAVE OF MENSTRUATION.

A PRELIMINARY NOTE.

WM. T. BELFIELD, M.D.
CHICAGO.

The record of the daily weight of four healthy, unmarried women between 22 and 29 years of age, and of average menstrual regularity, during a total of twenty-three menstrual periods, discloses a phenomenon which I have termed the weight wave of menstruation. This comprises the following features:

1. During several days, especially the first, preceding the menstrual flow, there occurs a progressive increase in the weight of a healthy young woman, often comprising—especially in winter—from two and one-half to five pounds, which may be from 1½ to 5 per cent. of her usual weight. The climax of this gain is immediately followed by the rapid loss of a large part, perhaps half, of this increase in weight (often within eight to sixteen hours) and then a more gradual loss of the remainder, extending over several days (Fig. 1).

2. The menstrual flow begins during the rapid loss of weight mentioned, the appearance of the blood often, though not always, following immediately on the crest of the wave. The flow continues with the less rapid loss of weight during the next few days, terminating about when the woman's weight regains its pre-menstrual level (Figs. 1 and 2).

3. The pre-menstrual gain in weight is due, not to increased ingestion of food, but to diminished excretion, especially of water. The rapid loss of weight following the crest of the wave is due, not to abstinence from food (nor, of course, to the trifling loss of menstrual blood), but to rapid excretion, notably of carbon dioxid and water. Thus I have seen a woman lose two and one-half pounds in weight during the five hours following the appearance of the menstrual flow, though neither urine nor feces had been voided during that period, and though the subject had had no exercise other than that incidental to clerical office work. (Her loss of weight during the same period, between menstruations, averaged less than one-half pound.)

4. The appearance of the menstrual blood does not always coincide with the beginning of loss in weight; the flow may begin before or, more often, after the loss of weight becomes distinct (Fig. 2).

5. After the weight has sunk to its pre-menstrual level, there may occur another crescendo and diminuendo movement, lasting several days, but less pronounced and typical than the menstrual wave. Hereafter the weight shows no constant variation until there occurs a sudden, transient loss, which is the frequent forerunner of the next menstrual wave.

6. A girl of 14 and a woman of 23, both of irregular menstrual habit, exhibited the menstrual weight wave on several occasions when the flow was nearly or quite lacking.

7. A woman of 59, who had not menstruated for twelve years, showed no weight wave characteristic of the menstrual period in young women.

8. For two days preceding the climax in weight there is often marked torpidity of the bowels and scantiness of urine; while, with the decline in weight, excretion

FIG. 1

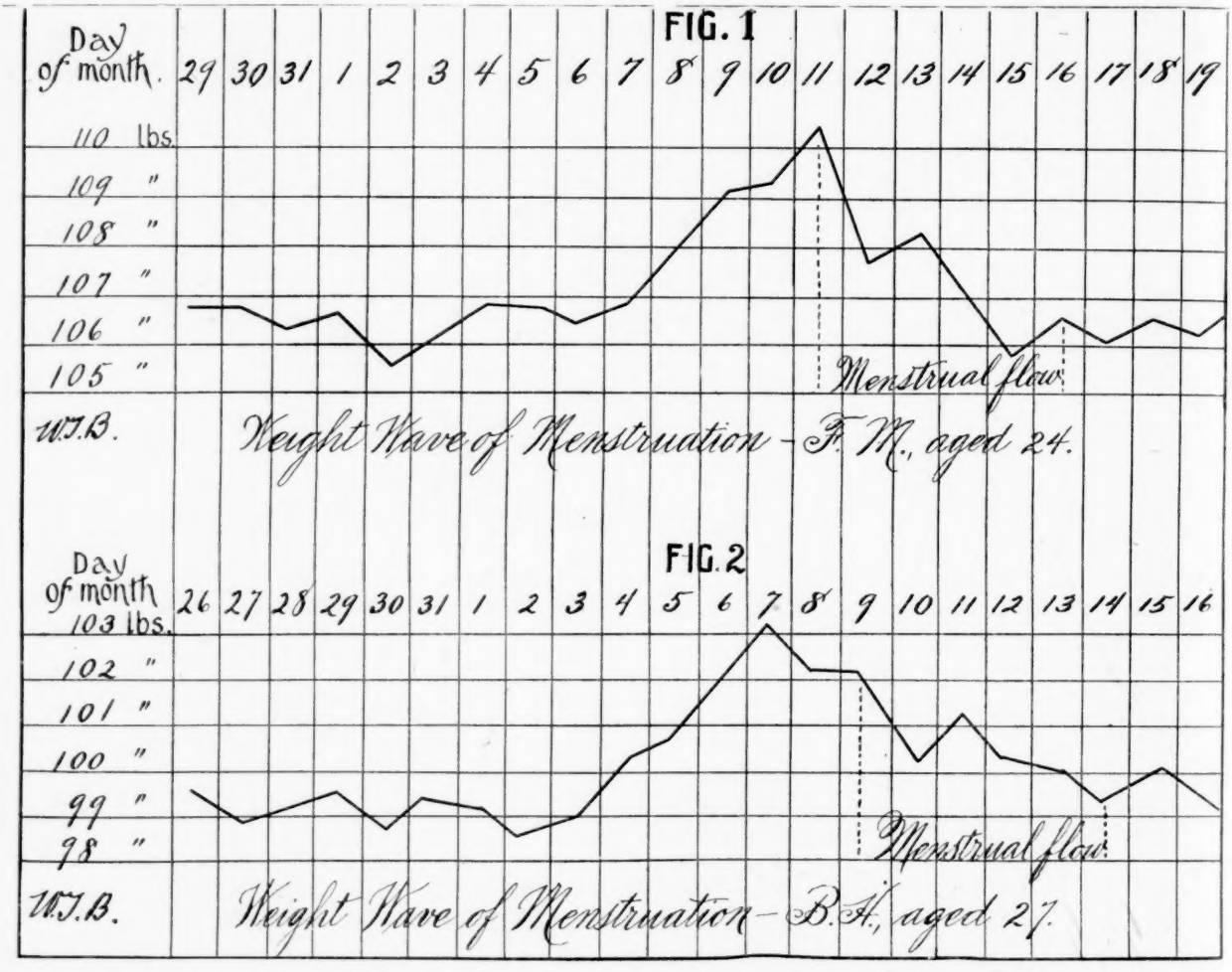

Day of month.
29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
110 lbs.
109 "
108 "
107 "
106 "
105 "
Menstrual flow.
W.T.B.
Weight Wave of Menstruation - F. M., aged 24.

FIG. 2


Day of month
103 lbs.
26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
102 "
101 "
100 "
99 "
98 "
Menstrual flow.
W.T.B.
Weight Wave of Menstruation - B. A., aged 27.

by bowels and kidneys, as well as by skin and lungs, is notably increased.

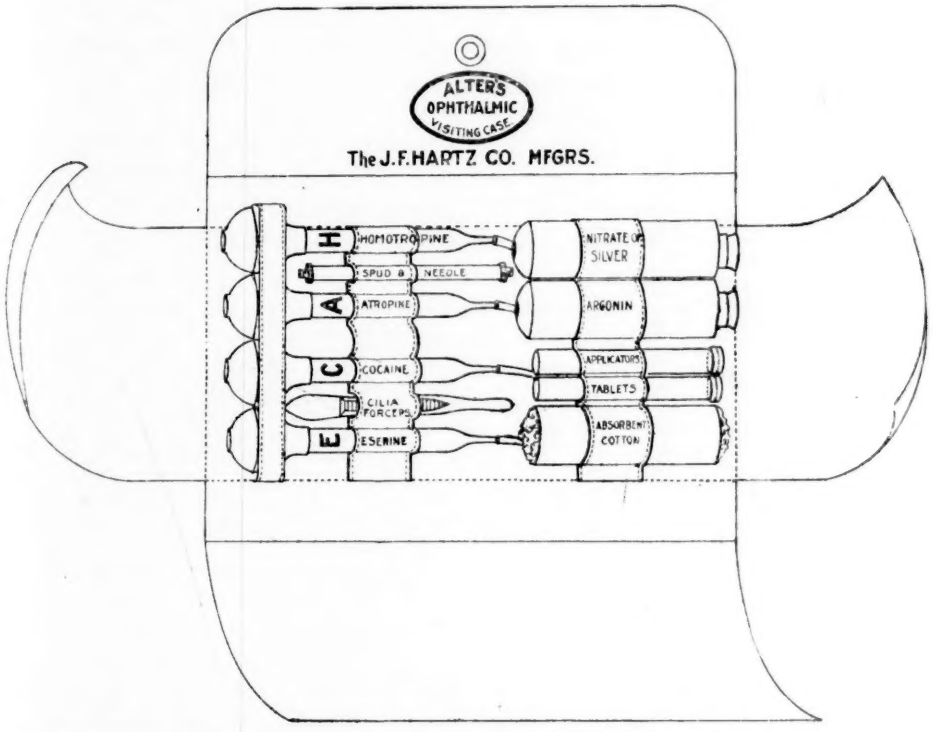
9. The temperature curve is not constant; there is usually a rise of about 1 F. during the increase in weight and a sudden fall after the crest of the weight wave is passed.

## New Instruments.

### A NEW OPHTHALMIC VISITING CASE.

FRANCIS W. ALTER, M.D.
TOLEDO, OHIO.

This little visiting case which I present to the profession and which is herein portrayed is of especial interest to oculists; it can, of course, be used by the physician in general work in connection with his ophthalmic cases.




As will be seen by the cut, it contains all the essentials commonly used in the treatment of eye cases, each dropper being marked in a manner indicating its contents.

The case contains cocain, atropin, eserin, homatropin, two bottles of silver nitrate in different strengths, a phial for toothpicks and a reservoir for cotton, beside a bottle intended to hold a relaxing tablet, a spud and a pair of epilating forceps, a pocket in the side of the case for prescription blanks, cards, etc. While the case is primarily intended as a visiting case it serves all purposes for office work.

338 Summit Street.

### A POCKET STERILIZER AND INSTRUMENT CASE.

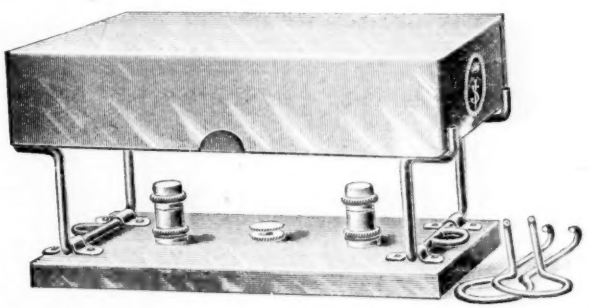
W. P. HERRICK, M.A., M.D.
NEW YORK.

The object in devising this case was to do for minor and emergency surgery what the compressed tablet has done for minor and emergency medicine. When closed and packed the case measures 7x3, ½x1½ inches or 17.5x8.5x4 cm., thus being easily portable in the breast pocket or emergency bag.

A telescope cover (see cut) gives an extra sterilized tray for instruments after boiling. The box itself being the boiling tray, both of these are manipulated, when hot, by the handles, the boiling tray by holes in its upper edge on either end, the cover by its edges, and the instrument tray proper by its wire handles. Thus we have a sterile field, with three trays, produced in one boiling.

As an instrument case, the instruments are packed in the instrument tray, held in place to prevent rattling or damage by spring crossbars caught in perforations of the tray on either side. This I believe is a new feature and thus the instruments are easily placed in the tray, the spring clips holding them, whether more or less are carried, as individual selection dictates. The instruments are all of standard size, a considerable convenience in operating not possessed by many pocket instrument cases. This selection approximates the usual hospital routine as follows: dissecting forceps, probe, small curved scissors and Kocker clamp; scalpel, artery clamp, Abbe needle holder, spool of silk and needles carried in a small needle box which also holds the sodium carbonate for boiling; Volkman spoon, director with aneurism needle handle and curved bistoury. If needed, the Kocker clamp and Abbe needle holder may be used with the artery clamp for hemostasis, thus giving three clamps, and for blunt extraction the aneurism needle and tray handles may be used. For minor and emergency surgery the above should be amply sufficient.

The essential part of the sterilizer is the double wick alcohol lamp, measuring 6½x 3½x½ inches, or 16.5x8.25x1.2 cm., having a capacity of about 80 c.c., a little less than three fluid ounces of alcohol, and thus can burn several hours steadily. When the boiling tray is half full of cold water, the usual amount, the boiling time is ten minutes. This will not be found excessive, however, as after lighting the lamp the preparation of the patient and sterilization of the hands will fully occupy it. With hot water the time is, of course, reduced proportionately, or the boiling tray may be placed on a gas stove or range, as is an ordinary sterilizer, should this be desirable. The wicks are covered by screw caps, as is the filler and vent when not in use, and folding legs support the boiling tray, which is kept from being knocked off in any way by the holders.



There are many other convenient surgical uses to which this case can be put, as in catheterization, or in clinic dressings; having continuously boiling water at your hand the instruments may be dipped as one passes from case to case, while with slight modifications of size or shape it would be all sufficient for many other surgical manipulations or operations of several of the specialties. Its cost will not exceed $6.75, exclusive of instruments, which is no more, I believe, than any first-class ordinary metal pocket case would cost.

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## IONS AND ELECTRONS.

Among the new words emerging from the laboratories of physics and chemistry which are finding their way into articles on medical subjects are "ion" and "electron." The word "ion" is already well launched medically; the word "electron," though but seldom met with as yet in contributions to the medical press, is destined to occupy, sooner or later, a very prominent place in medical writing. It seems worth while, therefore, to try to make the meanings of these words clear in order that those of our readers not quite at home with them may have less difficulty in understanding the articles in which they may chance to be used.

Bearing firmly in mind the conceptions of atoms and molecules gained in our chemical studies of the past, it is not difficult to pass on to the idea which the term *ion* has been adopted to express. After the establishment of the molecular theory, chemists soon made observations which led them to believe that they had to deal with particles which, on the one hand, were different from molecules and, on the other hand, possessed properties not pertaining ordinarily to atoms. It had been known for a long time that aqueous solutions of some chemical substances (e. g., sodium chlorid, hydrochloric acid, potassium hydrate) will conduct electricity, while those of others (e. g., sugar) will not. The substances, aqueous solutions of which will conduct, are called electrolytes. They are altered by the passage of the current, decomposing on electrolysis into certain constituents which become separated, one going to one electrode, the other to the other. Faraday showed that when a current of electricity acted on solutions of different salts, equivalent quantities of the metals are deposited by the same current in the same time. All inorganic salts are electrolytes, as are acids and bases. The hydrogen of acids always becomes separated at the negative electrode, as do the metals of salts, while the rest of the acid-molecule or salt-molecule becomes separated at the positive electrode. It was thought, at first, that the passage of the electric current determined the decomposition of the dissolved substance, though Clausius (1857) assumed that some of the molecules of an electrolyte are dissociated into their ions (kation and anion), and that these move independently of one another. The part of the dissolved substance that goes to the negative electrode was called the *kation*, while the part that goes to the positive electrode was called the *anion*.

The Dutch chemist, van t' Hoff, a little more than fifteen years ago, drew attention to the relation between dilute aqueous solutions and gases. Pursuing his studies further, he was able, in 1895, to apply Avogadro's law for gases to solutions and to make it almost certain that solutions having the same osmotic pressure, at the same temperature, contain the same number of molecules. But just as certain vapors, like ammonium chlorid, exert a greater pressure than would be expected according to Avogadro's law, so van t' Hoff found that certain substances in aqueous solution similarly "disobeyed" the law; these "irregular" substances are all electrolytes, non-electrolytes are "regular."

An explanation of the exceptions to Avogadro's law for gases like ammonium chlorid had been found in the suggestion that some of the molecules break up into a molecule of ammonia and one of hydrochloric acid; such a dissociation would cause an abnormally large gas pressure. Then came the epoch-marking paper of the Swedish physicist, Svante Arrhenius, in which the theory was advanced that in solutions of electrolytes the abnormally high osmotic pressure is due, not to a breaking down of molecules into smaller molecules as in the case of ammonium chlorid vapor, but to the dissociation of molecules into *ions*, each ion being an atom, or a group of atoms, charged with electricity. Thus, according to Arrhenius, in dilute aqueous solutions potassium chlorid is dissociated into potassium ions (kations) and chlorin ions (anions). The ion is entirely different from a molecule or a neutral atom; it carries an electric charge. The degree of dissociation in a solution can be quantitatively measured by establishing its electrical conductibility. In a concentrated solution of potassium chlorid there is but little dissociation; the substance is present in the water chiefly as KCl molecules and there are but few ions. In a very dilute solution the dissociation is great; there are few KCl molecules present, but an enormous number of ions. Dry copper sulphate is white or about colorless, for its molecules are colorless; dissolve it in water and the solution is blue, for copper ions are blue. Sugar does not become dissociated (ionized) when it is dissolved in water; hence solutions of sugar do not conduct electricity.

Again, when a substance is dissolved in water, the freezing point of the solvent is lowered. Certain substances had been found by Raoult to cause abnormally great depressions of the freezing point, and it turned out that they were the same substances which yield abnormally high osmotic pressures. The theory of Arrhenius of electrolytic dissociations explains these abnormalities wholly satisfactorily, as well as certain other abnormalities of the lowering of vapor tension of solvents, which need not be gone into here.

The development of the ionic theory has made many old facts turn new faces to us. The vast majority of chemical reactions prove to be reactions between ions, not between molecules. When HCl is neutralized with NaOH, the molecules are first dissociated into their ions

and the reaction consists in the union of the hydroxyl ion of the base with the hydrogen ion of the acid to form water, the sodium and chlorin ions remaining as ions in a dilute solution of sodium chlorid. The effect of salt solutions on the heart muscle seems to be due entirely to the action of the sodium ion, the chlorin ion being inert.

But chemists and physicists had still a step further to go, and the step has turned out to be a great leap. Investigators began to ask "What is the explanation of the electric charge on an atom which makes an ion so different from a neutral atom or a molecule?" Illumination came in an unexpected way. Years ago Sir William Crookes suggested that the kathode rays in vacuum tubes represent matter in a "fourth state," neither solid, liquid or gaseous. He was smiled at and almost jeered at for a while, but it seems he was right. The researches of J. J. Thomson and others have shown that the matter thrown off as kathode rays, and causing *x*-rays or phosphorescence where they strike, consists of fragments much smaller than atoms, of ultra-atomic corpuscles of which the chemist's atoms seem to be composed. The lightest atom hitherto known is the atom of hydrogen, but the atom of hydrogen weighs 1,870 times as much as one of these corpuscles. Moreover, no matter what their source is, these ultimate corpuscles appear to be identical. The name *electron* had been given to the electric charge on an ion by Dr. Johnstone Stoney; it is now believed by many that the difference between an ion and a neutral atom lies in the presence or absence on the atom of one of these ultimate corpuscles of Thomson, so that the name *electron* is now applied to the corpuscle. To some of the wonderful properties of these extremely minute electrons we expect to call attention in a subsequent number.

## THE TRYPANOSOMA DISEASES.

That some controversy has taken place concerning the priority of the discovery of the trypanosome as a pathogenic blood-infesting organism in man, denotes a well-grounded suspicion that this flagellate protozoön and the disease it produces, trypanosomiasis, may in the course of time occupy an important position among the infectious diseases common to man and the lower animals. In veterinary science the trypanosome has long been known as a potent agent of disease causing ravages of great economic consequence among cattle, horses and other domestic animals. In different countries the disease has received names more or less colloquial, and it does not appear to be definitely settled which of these may be due to identical or different trypanosomes. The nagana of Central Africa and the Transvaal is believed by Laveran and Mesnil[1] to be caused by the same organism as the mal de caderas of South America, although this requires further study for confirmation.[2] Koch, Nocard and others have expressed the belief that the trypanosomes of nagana and surra, the designation the disease has received in the Orient, are also identical. Theiler has recently reported a new trypanosome affecting cattle of the Transvaal which, unlike that of nagana, is non-pathogenic for other mammals; it also possesses differences of size and structure.[3] The discovery by Dutton of trypanosomiasis in man in the instance of an English government official and the report by Manson[4] and Maxwell-Adams[5] of other similar cases furnishes a forcible illustration of the valuable information to be derived from a study of tropical diseases.[6]

It is generally believed that in animals the disease is communicated by the bites of insects, nagana being widely known as the tsetse-fly disease; in dourine, the trypanosoma disease of cattle in Algeria, the adjacent European countries and Turkey, coitus furnishes the means of transmission of the disease from one animal to another and the first lesions appear on the genitals. The case of human trypanosomiasis reported by Manson, a woman and one of the European colony of the Congo region, experienced the first symptoms two or three days after an insect bite on the foot. Trypanosomiasis in animals is characterized by common symptoms, notwithstanding variations in the genus of the protozoa. A profound anemia, edema of the dependent parts, progressive paralysis and disturbances of vision are accompanied by remittent or intermittent fever. Horses and other equines in which the disease has been produced experimentally have died in from a week to a few months; in the Argentine Republic a chronic form of trypanosomiasis has been known under a distinct name, "baacy-poy." The organisms have not been found in the blood of animals ill from baacy-poy, yet such blood injected into healthy animals produces the acute form or mal de caderas. In Manson's case referred to above there was a periodic apyrexia of seven days interrupting a fever lasting three days; accompanying the fever an erythematous eruption developed on the face and trunk.

At the recent session in New Orleans, F. G. Novy demonstrated before the Section on Pathology and Physiology pure cultures of the common trypanosome of rats which had been grown on rabbits' blood serum mixed with agar. The growth occurs in the water of condensation and not on the surface of the medium, as in the case of bacterial growths. The experimental cultivation of an animal parasite on artificial media as a pure culture has not been heretofore accomplished, and great credit is due Novy and his assistant, W. J. McNeal, for the introduction of technical methods affording greater opportunities of studying these parasites.

The points of similarity between trypanosomiasis and malaria in the occurrence of protozoan parasites in the blood producing a destruction of the red corpuscles suggest the application of similar methods of cultivation to the plasmodium. The results of careful, thorough

1. Annales de l'Institut Pasteur, 1902, xvi, 26.
2. See the report by Elmassian and Migone. ibid, 1903, April, 245.
3. Compt. Rend. de l'Acad. des Sciences, 1902, cxxxiv, 512.
4. Brit. Med. Journ., 1903, i, 720.
5. Ibid, p. 721.
6. THE JOURNAL A. M. A., xl, 784.

study of an epidemic among rats at Ann Arbor and the discovery of allied parasites in man through researches in tropical diseases, it may be seen from the foregoing, are closely related developments of science and we may confidently expect that the next step, dealing with the prevention of the disease, will soon be taken. It matters little whether horses or rats be first successfully immunized, although the former accomplishment would confer a great benefit, since in horses trypanosomiasis is invariably fatal; the importance of immunization against diseases caused by trypanosoma, in its possible application to similar therapeutic measures in malaria, is at once evident. There are also other possibilities connected with studies of the evolution and development of the parasite, since light may be thrown on the etiology of other infectious maladies, the protozoan character of which has been suspected.

## PRESENT STATUS OF TYPHOID FEVER.

The Widal test has narrowed the bounds of typhoid fever very slightly in one direction, but has greatly extended them in many others. Certain febrile affections that run a symptomatic course, absolutely impossible of differentiation from typhoid fever by any clinical observation, however expert, which occur in epidemic form, have rose spots and a continued fever of self-limited duration, and with a tendency to hemorrhage from mucous membrane and enlargement of the spleen, with well-marked liability to relapses that repeat the previous stages of the disease—in a word, exhibit all of the group of symptoms supposedly pathognomonic of typhoid fever now known to be due not to the bacillus of Eberth, but to certain of the bacilli of the colon group. It is agreed that these are not true typhoid, but paratyphoid fever. How wide the limits of this new affection may be is not yet definitely known, but it is generally conceded not to be very common. Its true distribution remains to be decided by actual observation rather than by theoretic considerations. For instance, the very interesting question is now on the tapis whether in certain parts of the south, owing to climatic influences, paratyphoid fever may not be much more frequent than elsewhere, since certain recent observations point in this direction, and because the south has always presented some anomalous types of continued fever not easily reconcilable with the ordinarily accepted type of typhoid fever.

On the other hand, the Widal test has demonstrated with absolute assurance that a number of affections hitherto called by other names are really cases of typhoid. There is scarcely a part of the country that did not have a special continued fever, supposed to be characteristic to itself alone. This was often given a special name, such as mountain fever in the west, so-called camp fever in the east, typho-malarial fever in the south. According to the Widal test, mountain fever is undoubtedly true typhoid. The assumption of a typho-malarial fever in the south, supposed to be an intermediate between typhoid and malaria, has been abandoned. The so-called camp fevers of lumber regions and of military encampments are no longer considered independent entities. Obscure malaria at the north is now acknowledged to be, in most cases, sporadic typhoid fever. The country places, according to the statistics of the last United States census, are not spared any more than are the cities, so that all practitioners must be constantly on the look out for it. It is especially at the extremes of life that, according to the revelations of the Widal test, typhoid fever has proven to be much more common than was hitherto suspected. Even advanced age is no protection against the invasion of the typhoid bacillus, in spite of the atrophy of the lymphatic structures of the intestine, through which the bacillus usually finds its port of entry. A patient's age is no longer considered a diagnostic element for the exclusion of typhoid fever, since typhoid without intestinal lesions is not uncommon, and the Widal test has proven its occurrence even after 70. At the other extreme of life, even nursing infants may contract the disease from infected water given them between nursings.[1] In cities where typhoid fever rages with special virulence, continued fever in children is as likely to be typhoid as in their adult relatives.

In any part of the country and in patients of any age it is safest for the practitioner to assume, in case of doubt, that a continued fever is typhoid until it is proved to be something else. When continued fever presents anomalous symptoms that apparently preclude the diagnosis of typhoid fever, it should be remembered that the occurrence of other typhoid cases in the neighborhood make the best possible pathognomonic indication in doubtful cases. The epidemiologic rule that when an epidemic exists cases should be considered to come under this head until they can be absolutely proved to be something else, remains the most helpful aid for safe diagnosis. The frank immediate declaration of the existence of typhoid constitutes the best safeguard against the spread of the disease and at once arouses interest as to its possible source, thus initiating effective prophylaxis.

## THE FOURTH OF JULY TETANUS EPIDEMIC.

In a short time we shall witness the annual slaughter of the innocents. On the morning of July 5 there will be few communities that will not find recorded in the local paper an account of the sacrifice of some life to the celebration of the day before. The bursting cannon, the premature explosion, the burning building, the bulleted cartridge that was supposed to be a blank, will each claim its quota of victims, not to mention the lost eyes and fingers, the burns and injuries beyond number. Were this all, the record would be bad enough, but after the excitement is over, the glory of the day half forgotten, there will begin to appear scatteringly and, therefore, less prominently, accounts of the children who have succumbed after hours or days of suffering to the tetanus-infected blank cartridge wound.

1. Typhoid Fever in Children. Medical News, April 11, p. 711.

This annual tetanus epidemic is as certain as the Fourth itself, and in the large cities like New York and Chicago it amounts to about one-third of the total annual death rate from tetanus. In Chicago there are usually fifteen to thirty deaths from blank cartridge tetanus each year, while the entire number of deaths from tetanus each year is about fifty. Although there are plenty of other wounds received at this time each year, still the blank cartridge causes nearly all the tetanus infections. It is rare, indeed, that the lacerations from the exploding giant cracker are followed by tetanus. That this is not due to any infectious nature of the blank cartridge itself has been abundantly shown; repeated examinations have demonstrated that they are free from virulent tetanus germs. There can be no doubt that their danger lies in the nature of the wound they produce, and the circumstances under which the wound is received. Street dirt is a favorite habitat of the tetanus bacilli or their spores, and the hand that receives the wound is usually well covered with dirt at the time of the accident. The wad carries this dirt, with its contained organisms, deep into the hand, where the ideal anaërobic conditions exist, even excelling those of the famous nail wound of the foot. In proportion to the number of wounds received there can be no doubt that the blank cartridge wounds are far more deadly than the nail wounds, for they are certainly less common, yet they cause about as many deaths.

We should not forget that most of these deaths are preventable if the blank cartridge wounds are properly treated as soon as they are received. It is a sad fact that the greater number of cases of Fourth of July tetanus occurs in boys who have gone to some physician, not infrequently in a dispensary, who, instead of giving the wound the thorough treatment that it deserves, has superficially cleaned and dressed it. The responsibility here lies with the physician who first sees the wound. A thorough surgical treatment of blank cartridge wounds, supplemented by prophylactic injection of tetanus antitoxin when possible, would save many lives every year.

To accomplish the extinction of Fourth of July tetanus two things are necessary. The first is the enforcement of proper regulations of the sale of firearms and ammunition to minors. In cities where adequate precautions are taken, as in Washington, Fourth of July tetanus is practically absent. After this comes the education of the laity to an appreciation of the danger of this particular sort of injury, and in this the daily paper has a mission that, in a number of instances, it is making a commendable endeavor to perform. If the boy and his parent understand that an extremely large proportion of blank cartridge wounds cause lockjaw they will not be satisfied with anything less than the most thorough treatment, for the ordinary individual has a proper appreciation of the seriousness of this disease.

## ANOTHER VICTIM TO PLAGUE INVESTIGATION.

From Berlin comes the news that another investigator has fallen victim to accidental infection with plague, on which he was working. This involuntary martyrdom shows the extreme virulence of the plague bacillus. From dispatches in the daily press it appears that the German government has stopped further investigation in this disease because of the danger of its dissemination. Such curtailment of the freedom of investigation will probably not meet with the approval of the scientific world, in spite of occasional victims to accidental plague. Plague is so destructive a disease that science will not remain content until this disease is fully under control and eventually eradicated. To this end continued investigation is necessary; and investigation can be so safeguarded in specially isolated institutes that all danger of the dissemination of the disease is removed. In such institutes competent men should be encouraged to delve and work by adequate emolument. The investigators should live in the institutes while working with plague, and we feel sure that there will be no lack of competent men who are willing to go on and assume all danger attending the work.

## VERY ADVANCED THERAPEUTICS.

A rather curious medical assemblage, judging from newspaper accounts, has lately occurred in Connecticut. The Eclectic Medical Association of that state, which has just finished its session, was the occasion for some rather remarkable medical utterances. In the first place, the president's address, as reported, was peculiar, particularly when he had something to say about the smallpox epidemic or pandemic, which has existed in this country in a mild way for the last two or three years. He took a very cheerful view, indeed, stating—if he is quoted correctly—that smallpox is in reality something to be wished for instead of feared, and giving as his reasons that when it is prevalent we have fewer deaths from it than other diseases, and when it is really malignant we have fewer deaths from other causes. He consequently condemned vaccination, claiming that its use prepares the victim for either another disease or an early grave. There was evidently an attempt at something ultra-scientific at the meeting, as one of the speakers brought out some points which we have never seen mentioned before, and which seem worthy of comment. This speaker remarked that so much had been accomplished with argon in cancerous and other similar troubles that he had been led to experiment also with other newly discovered gases, helium, neon and krypton, and had obtained results far surpassing anything obtained from the *x*-ray or Finsen light treatment. We did not suppose that these substances had yet been isolated in sufficient quantities to be used to any great extent therapeutically, certainly not in tangible doses. If it had been a homeopath of the high dilution order we could imagine that he might see the possible effects of these substances even as they exist unisolated in the atmosphere and elsewhere.

## BLOOD CULTURES IN PNEUMONIA.

The application to the study of pneumonia of modern methods of blood cultures is yielding interesting and important results. The most recent and also the most

extensive work in this field is that of Rosenow,[1] who reports finding the pneumococcus in the cultures of the blood of pneumonics during life in 77 of 83 cases. In the 6 cases in which the cultures remained sterile there were good reasons to expect this outcome, because the cultures were made after the temperature had returned to normal; and the conclusion seems to be warranted that when the proper technical methods are used the pneumococcus may be recovered from the blood in all cases of typical pneumonia. This being the case, pneumococcemia in pneumonia can not be regarded as having an unfavorable prognostic significance, as concluded by earlier investigators, who obtained positive results in a much smaller percentage of cases. In obscure cases of pneumococcus infection blood cultures may be of positive diagnostic value. The results of blood cultures in pneumonia also tend to throw new light on the pathogenesis of the disease and its complications. Certainly the occurrence of pneumococci in the blood in practically every case of pneumonia constitutes a satisfactory explanation of many of the secondary pneumococcus localizations in this disease—the endocarditis, the arthritis, the meningitis. Perhaps the question now should read: Why are not these complications more frequent? What is the mechanism that leads to endocarditis in one case and not in so many others? Then again, this pneumococcemia revives the question as to the fundamental nature of pneumonia: Is it a general infection with a local manifestation, or is it a local disease with a secondary bacteriemia? This question can not be answered from the facts at hand. Some light would be obtained, however, if opportunity were presented to examine the blood bacteriologically at the very beginning of the attack, before any local signs are manifest.

1. Medicine, 1903, p. 435.

## Medical News.

### ILLINOIS.

**Sanitarium Incorporated.**—Dr. Sanger Brown and others have incorporated the Kenilworth Sanitarium, with a capital stock of $25,000.

**Gift for Neely.**—At an informal reception at the Cook County Institution, Dunning, May 30, the employes of the institution presented Dr. John R. Neely, the retiring general superintendent, with a diamond stud.

**New Contagious Ward.**—The plans for the new $75,000 hospital for contagious diseases, to be erected in the grounds of Cook County Hospital, were submitted to the county commissioners, June 6. The building is to be four stories high, fireproof, and will accommodate 116 patients.

**Personal.**—Dr. William E. Shasted, Pittsfield, has returned from a trip abroad, and has resumed practice.——Dr. Philip F. Gillette, assistant physician at the Illinois Northern Hospital for the Insane, Elgin, has resigned, and has been succeeded by Dr. Joseph M. Kearney, late assistant at Cook County Hospital for the Insane.

#### Chicago.

**Christopher Resigns.**—Dr. Walter S. Christopher has resigned as professor of pediatrics in the medical department of the University of Illinois, College of Physicians and Surgeons.

**Tuberculosis Sanitarium Dedicated.**—St. Anne's sanitarium for the treatment of consumptives at West Division street and North 48th avenue was formally dedicated by Bishop Muldoon, May 31.

**To Fight Smallpox.**—The finance committee of the city council has recommended an emergency appropriation of $10,000 to be used in combating smallpox. There are now 39 patients at the isolation hospital.

**Fugitive Physician Found.**—Dr. Gustaf Adolph Walther, who came to Chicago apparently well qualified, but who soon began to display questionable methods in practice, and who disappeared about eight months ago while under indictment for assaulting a young girl, has been located at Tegucigalpa, Honduras.

**Premature Celebration Tetanus.**—"Fourth-of-July lockjaw" has begun early this year. During the last five weeks, according to the health department bulletin, seven deaths from tetanus due to firearms, toy pistols and explosions have been reported. There were only twelve all told from similar causes up to the end of July last year and only four in 1901, when the mayor's proclamation was rigorously enforced and the number was reduced from twenty-four in 1900.

**Suits.**—Dr. Chalmers Prentice has sued the Geneva Optical Company for $12,000, alleged to be due on a contract for the payment of royalties on the sale of retinoscopes.——Mrs. Joel Connor, in a suit filed May 29 against the Chicago Lying-in Hospital and Dispensary, claims that her boarding house business has been damaged to the extent of $10,000 by the proximity of the hospital.——Dr. Moses Furlong and William Higgins have been sued for $25,000 by a German girl, who alleges that she was anesthetized and forced to undergo an operation, the result of which has been a permanent injury to her health.

**Drop in Deaths.**—The drop in the death rate—amounting to a little more than 21 per cent. less than that of the previous week, to 9.8 per cent. less than the average June death rate of the previous ten years, and to 5.7 per cent. less than that of the corresponding week of 1902—is warrant, says the department of health, for the hope that the murderous mortality of the last five months may be counterbalanced by a minimum rate during the remainder of the year. The 461 deaths reported for the week ended June 6 are 120, or more than one-fourth fewer than those of the previous week, and the rate—12.73 per 1,000 of population—is the lowest for any week since that of Nov. 1, 1902, when the rate was 12.56 per 1,000. There were 31 fewer deaths under 1 year, and 31 fewer over 60 years of age, while the deaths between 1 and 5 years remained the same as the preceding week. Pneumonia shows a reduction of 51 deaths; bronchitis, 5; nervous diseases, 12; heart diseases and violence, 11 each; cancer, 9; convulsions, 7; typhoid fever, 4; influenza, 3; measles and whooping cough, 2 each. The pneumonia deaths are the lowest since the week ended Nov. 29, 1902, and the typhoid deaths the fewest since the week of July 5, 1902—the beginning of the epidemic.

**The Hospital Question.**—It was announced last week in the daily press that only one hospital in Chicago was operating under a license from the city, and that the others found it impossible to comply with the requirements governing the location of such institutions. In order to secure a license, a hospital must have the "consent of the person or persons who may be the owners or agents of the entire frontage of the four sides of the block in which such building is to be located and the entire frontage of the block on the opposite side of the street on which the building faces." In consequence of the prohibitory nature of this section of the building ordinance, and to test its validity, the commissioner of health requested the city prosecutor to institute proceedings against 46 hospitals which have persistently violated the ordinance in this especial regard. The city council, at its meeting, June 8, passed an ordinance which prohibits the establishment of hospitals for the treatment of the insane, inebriates, drug victims, epileptics, or for contagious diseases, unless a majority of the frontage in the block and the opposite sides of the streets facing the block is obtained. A motion to include maternities in the ordinance was lost. When such hospitals are to be more than two stories high the building must be of fireproof construction. Amendments were referred to the committee on health prohibiting the establishment of such hospitals within 200 feet of a school building, and also to prohibit the use of a hospital for more than one class of patients, and providing breathing space around hospitals to be constructed: Where there are less than twenty beds, fifteen feet on each side of the hospital must be vacant; from twenty to fifty beds, twenty-five feet; more than fifty beds, fifty feet.

### MARYLAND.

**Scarlet Fever Closes School.**—The colored public school at Towson has been closed on account of the prevalence of scarlet fever.

**Personal.**—Dr. P. F. O'Neil, Baltimore, has been appointed assistant to Dr. James M. Spear, secretary of the Cumberland City Board of Health, and has taken charge of the Emergency Hospital there.——Dr. James A. Stevens, Oxford, has been elected state medical examiner by the Medical and Chirurgical Faculty of Maryland, vice Dr. Charles F. Davidson, Easton, who declined re-election.

### Baltimore.

**May Vital Statistics.**—During May 753 deaths and 678 births were reported. Scarlet fever was the most prevalent of epidemic diseases. Pulmonary tuberculosis caused 100 deaths, and pneumonia 74.

**Dinner to Osler.**—Ex-resident and associate physicians of the Johns Hopkins Hospital gave a dinner to Dr. William Osler, May 15, and presented him with the "Dictionary of National Biography," in 65 volumes.

**Personal.**—Dr. C. M. Franklin of the Sheppard and Enoch Pratt Hospital has been elected professor of psychiatry in the Woman's Medical College.——Dr. H. Barton Jacobs sailed for Liverpool, June 3.——Dr. William Lee Howard is visiting the psychopathic hospitals in Italy and France.

## MASSACHUSETTS.

### Boston.

**New Roxbury Hospital.**—The new Deaconess Hospital in West Roxbury will be 84 by 66 feet and three stories in height, of red brick and terra cotta and is to cost $105,000. It is to be one of a group of buildings to be built later on.

**Personal.**—Dr. Charles C. Foster of Cambridge, formerly surgeon-major of the Fifth Infantry, has been appointed medical director of the Second Brigade, M. V. M., made vacant by the retirement of Lieutenant-Colonel William H. Devine.

**Better Classification of Insane.**—At the recent meeting the State Board of Insanity devoted most of its attention to the great need of better classification of the insane of the state and the city. Drs. Jelly, Ayer, Adams, Copp, Howard, Page, Lane, and others, each spoke most earnestly on the great value of separating the curable from the incurable and the mild from the severe cases, as can not be done in the present extremely crowded condition of all the institutions.

**A Better Report.**—Not for two years and six months has the local death rate touched as low a point as for the week ended June 6, namely, 14.94 per 1,000 per annum. The decrease is general and in no special class or disease—17 deaths occurred from pneumonia, 2 from whooping cough, 10 from heart disease, and 4 from bronchitis. There were reported 31 cases of diphtheria, with 4 deaths; scarlet fever 41 cases, with 3 deaths; typhoid fever 9 cases, with 2 deaths; measles 42 cases, with 2 deaths, and tuberculosis 10 cases and 25 deaths.

## NEW YORK.

**Taxation of County Medical Societies.**—The tax commissioners are to begin suits to test the constitutionality of the law passed by the last legislature exempting from taxation the property of county medical societies.

### Buffalo.

**Personal.**—Dr. Harry Meade has returned from Europe.——Dr. Clawes of the Cancer Laboratory has sailed for Europe, and Dr. Burt C. Johnson is soon expected home from Europe.

### New York City.

**Columbia Appointments.**—Dr. C. A. Herter has been appointed to the chair of pharmacology and therapeutics, Dr. Joseph A. Blake lecturer in surgery, and Drs. Forbes Hawkes and C. A. McWilliams instructors in surgery at the College of Physicians and Surgeons of Columbia University, New York.

**No Fees for Health Board Physicians.**—The health commissioner having heard that physicians and employes of the health department accepted gifts and fees, issued an order forbidding any physician in the employ of the department to accept a fee for professional services, or for signing certificates or affidavits to insurance blanks from persons with whom he had been brought in contact by reason of his official connection with the department.

**Notification of Diseases.**—The health department is considering the advisability of greatly extending the present list of reportable diseases. The most important proposed addition to the group of disease in which notification is compulsory, is puerperal septicemia. It is thought that this will serve as a restraint on the midwives. In the other group are those diseases in which notification is compulsory only in the case of institutions, though private physicians are requested to report them for the purpose of accumulating valuable statistical information. This list will probably include influenza, lobar pneumonia, broncho-pneumonia, infectious diseases of the gastro-intestinal canal and parasitic skin diseases. The board disclaims any intention of exercising sanitary surveillance over these diseases in the event of their being made reportable.

## PENNSYLVANIA.

**Endows Bed.**—The will of the late Hannah B. Fry leaves $5,000 to St. Timothy's Hospital, Roxborough, for the endowment of a free bed.

**New Buildings.**—The new building of the State Insane Hospital, Harrisburg, costing $40,000 will soon be ready for occupancy. The four additional new buildings are soon to be erected at a cost of more than $250,000.

**Personal.**—Dr. Thomas C. Fitzsimmons of Wilkesbarre has been appointed a member of the commission of the Eastern Pennsylvania State Institution for the Feeble Minded and Epileptic.——At the recent meeting of the G. A. R. of Pennsylvania, Dr. Alfred Smith, Beaver Falls, was made medical director.

### Philadelphia.

**Increase in Typhoid.**—For the week ended June 6, 315 new cases of typhoid fever were reported, an increase of 51 over the previous week.

**Board of Education Appointments.**—Dr. Charles S. Turnbull has been appointed a member of the board of education, to fill the vacancy made by the death of Dr. Thomas G. Morton. Dr. T. J. Buchanan has also been appointed a member of the board.

**Early Phthisis Sanatoria.**—Director Martin has a plan for establishing, for the summer, sanatoria in Fairmount Park where children of the tenement districts and persons in the early stages of phthisis may be cared for. It is the purpose to enlist charitable organizations in the work, the department exercising general supervision over these field hospitals, and furnishing certain supplies. The Red Cross Society offers to supply 25 nurses.

**President Honored.**—At the thirty-eighth annual meeting of the Jewish Hospital Association, held May 31, a portrait of William B. Hackenberg, for twenty-five years the president of the association, was presented to the institution. Dr. Solomon Solis-Cohen made the presentation address. The president pointed out that while the income for the year had been $61,192 the expenditures exceeded this amount by $5,026. Legacies and endowments of $67,127 had been received.

**Sanatorium Opened.**—The twenty-seventh annual opening of the Red Bank Sanatorium on the Delaware River, a short distance below Philadelphia, took place June 6. Fifteen hundred children of the poor were delightfully cared for on the opening day by this life-saving charity. From the opening until August 31, holidays and Sundays excepted, free excursion boats hourly carry passengers to this river resort. Sick children are freely cared for in the hospital on the grounds and are provided with food and delicacies.

**Pure Food Crusade.**—B. F. Warren, commissioner of the dairy and food department, has begun an active crusade against adulterated products. Warrants have been served for a score or more of prominent dealers, charging them with selling adulterated lard, and an equal number of warrants have been sworn out for other dealers. Analysis of the so-called lard shows that it consists largely of cotton-seed oil and tallow stearin. A large corps of agents are now canvassing the city, with instructions to prosecute to the fullest extent any violations of the pure food law.

**Physical Fitness of Teachers.**—The hygiene committee of the board of education has adopted a rule requiring all candidates for teaching positions in the public schools to furnish certificates of physical fitness. The applicant must answer questions as to recent illness, association with cases of phthisis, whether disease of throat, eye or ear exists, and as to the use of narcotics and alcoholic liquors. In addition, a reputable physician must certify whether the applicant has phthisis, leprosy, contagious disease of the skin or mucous membrane, defect of hearing, an irremediable defect of vision, etc.

**The Index Medicus.**—The College of Physicians recently adopted the following resolutions:

WHEREAS, Through the generosity of the Carnegie Institution, which has pledged $10,000 a year for three years, the *Index Medicus* has been revived; and

WHEREAS, The Index is valuable to the profession, not only of America, but of the whole world, and its permanent establishment is of the utmost importance to the profession at large; and

WHEREAS, If the profession does not support this publication by a generous subscription it can not be expected that the Carnegie

Institution will continue to defray nearly the entire expense of its publication; therefore,

*Resolved*, That the College of Physicians requests each fellow, if within his power, to subscribe for at least one copy.

**Against Impure Milk.**—Dr. A. C. Abbott, chief city bacteriologist, who entered on his duties as chief of the bureau of health, June 1, has begun a campaign against impure milk. Additional inspectors are to be provided. The condition of milk shops are being investigated, and a number of dealers have been ordered to cleanse their places or to close up. It is the purpose to reduce the high infant mortality that commonly prevails during the summer months. A conference of the mayor, Dr. Martin, director of the department of health, Dr. Abbott, and the state veterinarian will perhaps result in a request to the State Board of Health to act in conjunction with the local authorities in regulating dairymen in the handling and marketing of milk.

## GENERAL.

**Cholera Decreasing.**—The recrudescence of cholera in the Philippines is subsiding.

**The new board of health of Hawaii** organized for work and held its first meeting May 13. President Cooper and Dr. W. H. Mays are the two physicians on the board, the other four are lay members.

**Panama Canal Construction.**—There are 45 physicians employed to care for the 1,500 laborers and foremen and 160 civil engineers who are now in the pay of the United States, working on the canal at the isthmus. The daily expense of the construction amounts to about $5,000, according to the Chicago *Post*.

**Non-Lepers Prefer Life of Ease.**—Inmates of the leper colony, Molokai, Hawaii, who are free from leprosy, are unwilling to leave. Some of these went there to care for relatives who have since died. They are not furnished food but live on the hospitality of the lepers. Their removal is attended with difficulty, according to reports by the territorial board of health. A re-examination of all within the colony is ordered by the board to determine who are free from the disease. None, however, wants to leave, because of the easy life and the supply of clothing and food at public expense in a delightful climate, which they now enjoy.

**International Hygiene Congress.**—The following Committee of Organization for the United States for the Eleventh International Congress of Hygiene and Demography, to be held in Brussels, Sept. 2 to 8, 1903, has been appointed, at the request of the Belgian government, by the Department of State: Drs. E. A. de Schweinitz and A. B. Richardson, Columbian University, Washington, D. C.; Dr. John Marshall, University of Pennsylvania; Dr. Harrington, professor of hygiene, Harvard University. The committee desires to secure the co-operation of all in this country who are engaged in hygienic work, both in attendance at the meeting in Brussels, and in sending papers to the congress. The congress will be divided into two sections, hygiene and demography. The subjects which will be considered are the relation of bacteria and parasites to hygiene, the hygiene of foods, the treatment and prevention of communicable diseases, etc. The important subject of the communicability of tuberculosis will be discussed in its various phases by prominent men. The fee for membership is 25 francs, which may be sent Secretary-General M. le Dr. Felix Pulzeys, Rue Forgeur l. à Liège, Belgium. Those proposing to attend or send papers will please notify Dr. E. A. de Schweinitz, Washington, D. C.

## CANADA.

**Large Donations to Cottage Hospital Fund.**—On May 17 the Lady Minto Cottage Hospital Fund received $51,000, the following four gentlemen of Toronto each contributing $10,000: Senator George A. Cox, Mr. D. D. Mann, Mr. William McKenzie and Mr. Chester D. Massey.

**Isolation of Scarlet Fever Patients in Ontario.**—Three months ago the Ontario Board of Health, at their regular quarterly meeting, decided that all patients suffering from scarlet fever must be isolated and removed to buildings or tents specially prepared for them. This stringent measure was deemed advisable owing to the very high death rate which has now prevailed in Ontario for some months from this disease. Several benevolent societies have taken the matter up, as they consider that any regulation which takes a child away from its mother and removes it to a tent, especially in the dead of winter, is inhuman.

## FOREIGN.

**Yellow fever** has broken out at Progresso, Mexico, on the Gulf Coast.

**Official Warning Against an Anti-Morphin Remedy.**—The Berlin chief of police has issued an official warning against "Nicolicin," a remedy advertised to cure morphin addiction. He states that the principal ingredient is morphin, with a little salicylic acid, and it is thus unsuited to the purpose for which it is sold.

**Physicians in Spanish Congress.**—The recent elections resulted in the election of four physicians to the lower house and seven to the upper house of the Spanish parliament. Dr. Cortezo, editor of the *Siglo Medico* and president of the Internal Medical Press Association, was appointed vice-president of the upper house.

**Norwegian Medical Study Trip.**—An attractive program is announced for the trip in August to the various health resorts in or near Norway. The party will gather at Hankö, August 7 and disband the 21st. The total expenses of the trip will be at most less than $50. Dr. S. Meyer, St. Kongensgade 71, Copenhagen, has charge of the trip.

**Plague Investigation Stopped.**—Because of the death from plague of Dr. Milan Sachs, who was experimenting with the germs at the Berlin Hospital, the government has ordered further experiments to cease, fearing the danger to the public from the handling of the deadly germs. The investigations were conducted in an isolated laboratory and no outsider was allowed to approach.

**Consultations for Economic Questions.**—The Leipsic "Verband" has organized an information bureau for consultations in regard to all matters affecting the material interests of members of the profession in Germany. A leading legal authority has been appointed consultant. It is especially designed to aid physicians in entering on contract practice or altering their contracts. Advice is free to members of the "Verband" and to local societies which may apply.

**Collective Cancer Inquiry in Hungary.**—Dollinger of Budapest has undertaken a collective inquiry as to the number of cases of cancer in treatment, October 15, 1903. The step was taken at the request of the government and question blanks have been sent to all the physicians in the country. They are urged to take note of tumors in the animals in contact with the cancer subjects, dogs, cats, cows and horses. The fate of persons previously operated on for the removal of malignant neoplasms is also to form part of the study.

**Campaign Against Alcoholism.**—An important step has been taken in this line by the German ministers of agriculture, commerce, of the interior and of public instruction, who have signed a joint appeal to the local authorities throughout Prussia urging the establishment of comfortable reading rooms, assembly halls, etc., where workingmen may gather without the necessity or the temptation to buy spirituous liquors. Drinking fountains should be erected and abundant opportunities provided for procuring temperance drinks in the public places and populous streets, and the public should be instructed in regard to the dangers of alcohol on every suitable occasion. The local authorities are requested to report the results in 1905.

**Sclavo's Anti-Anthrax Serum Wins the Riberi Prize.**—The Turin Academy of Medicine has awarded the Riberi prize of $4,000 to Professor Sclavo for his successful anti-anthrax serum, as the best work accomplished in the medical field during the five years since the prize was last awarded. In a recent communication on the subject Sclavo stated that 293 persons have been treated for malignant pustule with anti-anthrax serum, including a case recently reported by Sanfelice, in which the serum of dogs immunized against anthrax was used. Sclavo announces that a rise of temperature after the injection is a most valuable sign, as it indicates a favorable prognosis as a rule. When the serum is used local treatment is unnecessary, and if administered in time the lesion heals and the edema is spontaneously absorbed. He has found the best method to be a single large dose, slowly injecting 40 to 50 c.c. at three or four points in the forearm or back of the hand. This serum treatment has found a cordial welcome in Argentina, where it has been applied in 130 cases, reducing the mortality to zero except in the moribund cases. Competition for the Riberi prize is open to the world, as previously announced in these columns, but preference is given to a work that tends to improve hygienic conditions in Italy.

**The Outlook for the Physician.**—Dr. Hofmann, Dillenburg, in a letter to the *Deutsche Med. Wochft.* discusses the outlook

for the profession and thinks that the aim of the physician should be to be assured of a comfortable income while reducing the single fee to the lowest possible figure. He thinks that the experience of the duchy of Nassau should prove instructive. It was early appreciated that the health of the populace was a most important public matter and, therefore, all the physicians in the country were supported by the state at a comparatively high salary for those days. The duchy was divided into "medical districts," each with its physician, although the inhabitants were not restricted to employ the nearest. The state paid one-half the income allowed him, and the other half and more if possible he was to make by his practice. The single fee was established by law at fifteen cents for a call in his district, and ten cents for office consultation. The arrangement was considered highly satisfactory for all parties and the profession enjoyed great prestige. In 1866 the duchy lost its political independence and the medical officials their state support, but the medical districts were maintained by the population which paid the physicians a stipend equal to twelve cents per capita on an average, for which he in return treated the poor gratis. The old fee has been retained in some of the districts, but in others it has been increased to a maximum of twenty-four cents under this régime. The physician's fee at all times was the same, irrespective of the distance from his residence. Hofmann thinks that some such arrangement outside of the large cities would solve many problems.

**Annual Meeting of German Central Committee for Erection of Sanatoria.**—The general interest that has been aroused in Germany in regard to the sanatorium treatment of tuberculosis was well illustrated by this recent meeting. The committee has now 1,300 members, including 83 physicians, 6 government ministers, 24 insurance companies, 159 government employes, 344 merchants and manufacturers and 39 business houses with 4 boards of trade. The principal address was by von Leyden, who reported most gratifying results from the movement. In the 74 sanatoria at present in operation 30,000 patients were treated during the year, and 80 per cent. are so much improved that they can be called practically cured. He stated that the mortality has diminished from 30.95 per 10,000 in 1875, to 19.50 in 1901. He expatiated on the marked improvement that has followed the organized effort to care for the families when the bread winner is sent to the sanatorium. Gobel stated that the number of persons to whom insurance was paid on account of tuberculosis has increased from 11 to 13 per cent. since 1898, but, on the other hand, the number of pensions paid for non-tuberculous affections has diminished by 4 per cent. The ravages of tuberculosis are shown by the fact that out of every 1,000 indemnities paid, 549 were on account of tuberculosis at the age of 20 to 24; 509 from 26 to 29, and 429 from 30 to 34. These figures were for men. The corresponding ones for women are 425, 343 and 258. Each patient has cost the national insurance societies 355 marks, about $90, the daily expense being about $1 (4 marks, 69 pfennigs). The length of the average sanatorium course was 79 days. During the last four years the proportion of those dismissed practically cured has increased from 27 to 31 per cent. Other speakers urged the necessity of isolation of consumptives and of preventive and curative treatment of tuberculosis in children who are more often affected than hitherto deemed possible. Pütter advocated that prophylaxis should be along the three lines of education of the tuberculous subject, his isolation as far as possible from the rest of his family in his home and free formalin disinfection.

## LONDON LETTER.

### Chloroform in the Preparation of Vaccine.

At the Royal Society Dr. Alan B. Green described a method of using chloroform for the elimination of extraneous organisms from vaccine lymph. Sterile air is passed through chloroform and becomes saturated with it. It is then passed through the vaccine emulsion which has been prepared by triturating one part of vaccine pulp with three parts by weight of distilled water. It is essential that no liquid chloroform be allowed to pass into the vaccine since its presence is strongly inimical to the potency of the vaccine. The vaccine is quickly saturated with chloroform, the excess after saturation escaping automatically. The germicidal action is very rapid, emulsions with as many as 100,000 organisms per platinum loop become free from them in six hours. After elimination of extraneous bacteria in this way the chloroform in the emulsion is evaporated by passing through it a stream of sterile air. Only the non-spore-bearing bacteria are killed by this procedure; but in some thousands of vaccines examined in the government lymph laboratories the only spore-bearing organisms found were non-pathogenic. Dr. Green thinks that this method will prove valuable when there is an urgent demand for a rapid supply of vaccine lymph, such as may occur during smallpox epidemics; vaccinations from the lymph so prepared have given excellent results.

### The Wounded in Naval Warfare.

At the Royal United Service Institution Dr. Phillip Randall, formerly a naval surgeon, read an important paper on "The Disposal of the Wounded in Naval Warfare." He pointed out that although attempts had recently been made to call attention to the subject there was almost complete absence of it in the works of all the leading authorities on naval warfare. Medical officers viewed with forboding the prospect of being called on to deal with a large number of serious injuries. The conditions of naval warfare have greatly changed since the British navy was engaged in great wars. The sick berth of the present day has gained light and air, but its situation in all modern ships was untenable in warfare. A return to the cockpit principle had been decided on officially for some time, but beyond the selection of a site nothing had been done to make the place suitable. The number of wounded that would have to be dealt with after an engagement should be determined as approximately as possible. After giving figures of some of the battles of the last great wars Dr. Randall said that the working average of 7 per cent. of the complement, as the number of wounded to be expected in each ship, was the irreducible minimum. He then considered the condition of the ship after action, the accommodation provided in naval hospitals on land and the probable distances from such hospitals at which naval action might occur. The one conclusion was that in the fighting line afloat as in that ashore all treatment of the wounded beyond "first-aid" would be impracticable, and further, that after-treatment on board would be practically impossible. The adoption of the principle of hospital ships for fleets would be quite practicable and would go a long way to meet the needs of the situation. Every fleet should have one or more hospital ships attached to it. These would cruise with the fleets, and having first received all cases of serious injury from the ships would accompany them to the verge of safety when they went into action. Each hospital ship should be provided with as many large and roomy boats as it could carry. By means of these endeavors would be made to keep close communication with the fighting line, seizing on every opportunity to collect and transfer to the hospital ship as many wounded as possible.

# Correspondence.

### The Transmission of Yellow Fever.

HAVANA, CUBA, May 28, 1903.

*To the Editor:*—Dr. James Carroll, U. S. A., in the paper which he published under the above title in THE JOURNAL, May 23, does me the honor of arguing at great length on my statement that the yellow fever Army board of which he was a member had tacitly denied my rights of priority. I was thus referring to many items of the mosquito theory which the said board had presented to the public as so many new discoveries of their own, ignoring the circumstance that although I had not always been in a position to demonstrate my assertions experimentally, I had included those same items in my theory of yellow fever transmission. Dr. Carroll has indeed now changed the tacit denial into an explicit one, without, however, refuting any of the evidence on which my former statement had been founded. (See my paper in *Medicine*, Detroit, March, 1903, pp. 178 and 179.) I agree with him, however, in thinking that rather than to enter into any controversy it is better to leave the decision to those who will take the pains of reading our respective publications, including, however, one which Dr. Carroll has forgotten, namely, my paper on "Two Different Ways in Which Yellow Fever May Be Transmitted by Mosquitoes," which was published in THE JOURNAL, Nov. 23, 1901. In this paper I have clearly shown that the Army board has never seriously investigated my direct inoculation with recently contaminated mosquitoes. When I had asked them to do so they excused themselves, alleging that they had too few non-immunes at their disposal. This investigation, if favorable to their presumption, would

have been the only justification for their attitude of persistent denial that any of my positive results deserve to be taken into consideration. They took the ground that the yellow fever germ must be a parasite of the same nature as the malaria parasite, and that the same rules must be applicable to both. That they were quite mistaken in this last inference I have recently proved in a paper on "Probable Nature and Life Cycle of the Yellow Fever Germ" (see *Revista de Medicina Tropical* of Havana, English text), in which I have demonstrated that although it must be admitted that both germs appear to be protozoa of similar nature and life cycle, yet there is this essential difference between them, that while the malaria germ has the human subject for its permanent host and the anopheles for its intermediate host, the reverse happens with the yellow fever germ whose permanent host is the stegomyia and its intermediate one the human subject. A difference which leaves out of the question such analogies as the Army board has attempted to establish between the two cases.

The phase of development of the parasitic germ which takes place in the body of the mosquito host must consequently be considered as quite different in the two diseases. In yellow fever the interval of time which elapses between the bite of the fresh stegomyia on the infecting patient and the moment when the insect is able to reproduce the disease, in its complete forms, must be supposed to represent the number of days required by the embryo parasites to reach their adult development after they have been sucked up with the blood of the yellow fever patient; but not, as happens with the malaria parasite in the body of the anopheles, the time required for the sexual reproduction of the parasite and for the accumulation of the newly-hatched embryos in the salivary glands of the insect, as the Army board had assumed.

I feel bound, before closing this article, to answer several charges which Dr. Carroll has brought against me. One is, in substance, that availing himself of my present position I have shirked the opportunity of testing my own method of direct inoculation with recently contaminated mosquitoes by obtaining an order forbidding further experiments with mosquitoes having ten or more days of contamination, and only allowing the handling of contaminated mosquitoes to persons well acquainted with the dangers, etc. (See *Medicine, loc cit.*) How Dr. Carroll manages to reconcile his conclusions with these premises I fail to understand, specially if he remembers that there have been only a few imported cases of yellow fever during the last year, and none has originated on the island.

Another charge is that my claims of priority should have been accompanied by unmistakable evidence, in print, as proof that the facts have been demonstrated and duly reported. I have never claimed that I had demonstrated the facts, but I have proved by unmistakable evidence, in print, that I had foretold the results which the Army board afterwards confirmed, giving them as original discoveries of their own.

My table of 104 inoculated persons with recently contaminated mosquitoes (so far as I could judge, operating as I did with insects which were not bred from the larvæ), was handed to the Publication Committee of the Third Pan-American Congress, together with the paper which I read at that congress. Seeing that the publication of the transactions was delayed, I gave a copy of those same tables to Dr. Coronado, who published them in a volume which he dedicated to me and in which were included several reprints from the *Revista de la Asociacion Médica Farmaceutica*. I am sending a copy of this book and also of my paper on "Probable Nature," etc., to THE JOURNAL.

Dr Carroll somewhat sarcastically refers to my humane feeling in having refrained from proving my theory, in my own series of inoculations, for fear of producing a severe attack on persons who had relied on my assurance that no risks would be incurred through my procedure; but he seems to doubt my sincerity because he once saw me apply a fully contaminated mosquito to a non-immune. He, however, carefully silences the circumstance that this non-immune had been informed of the risk that he was incurring, that he had accepted that risk in view of a certain compensation, and that I was induced to perform the experiment believing that it entailed a lesser risk than letting Dr. Calda's assertion go unchallenged when he declared that this same man had been rendered immune through the injection of a secret preparation for the efficacy of which he was trying to obtain our support.

The only part of Dr. Carroll's criticism to which I must plead guilty is the confusion arising from my descriptions of my case No. 3. The second statement to which he refers was made from memory at a time when I had mislaid my original notes. I found them again, however, last year, and ascertained that the experiment had been really made under the conditions which I took the first opportunity of publishing, as a footnote, in the *Revista Médica Farmaceutica*, February, 1902, page 369.

With these explanations I trust that Dr. Carroll and the readers of THE JOURNAL will be satisfied. Dr. Carroll, on the other hand, does not give his reasons for reducing to eight days the minimum space of time required for the contamination of the stegomyia while the Army board has fixed that limit at from 10 to 12 days; nor does he present any reasonable grounds for his belief that, *cæteris paribus*, the simultaneous bites of several contaminated mosquitoes should not be expected to produce more severe effects than that of only one of those insects. The Army board, at any rate, is not responsible for these innovations of Dr. Carroll any more than for the charges which he has brought against me.

Apart from such secondary questions, as claims of priority must be acknowledged to be, I must reassert once more my keen appreciation of the invaluable work which the yellow fever Army board has achieved, and I gladly recognize that all the arguments on which my recent paper on the life cycle of the yellow fever germ are entirely founded on the findings of that board. I also beg to express my deepest sympathy in the untimely death of its accomplished and enthusiastic chairman, Dr. Reed, and in that of Dr. Lazear, who was probably the first American convert to the mosquito theory and died a martyr to his scientific zeal in the course of its investigation.

CARLOS J. FINLAY, M.D.
Chief Sanitary Officer of Cuba.

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HAVANA, CUBA, May 30, 1903.

*To the Editor:*—Being the only other survivor of the Army yellow fever board which demonstrated beyond further doubt the transmission of that disease by the mosquito *Stegomyia fasciata*, I may be permitted to record a few facts in connection with said investigation, and in refutation of the openly-made or implied assertions by my learned colleague and late coworker, Dr. James Carroll, Washington, D. C., published in THE JOURNAL, May 23, 1903.

The omission of my name in the early part of the article referred to, where mention is made of Drs. Reed and Lazear, loses its importance before my eyes, when, on continuing the reading of the text, I find it directed principally in a fruitless endeavor to assail Dr. Finlay's right to the honor of the discovery of the only known way by which yellow fever is transmitted.

Aside from this attack on Dr. Finlay's claims, all that appears in Dr. Carroll's paper has been published before in the various articles presented by the Army board by Drs. Guiteras, Gorgas, Ross and myself. (*Revista de Medicina y Cirugia*, Habana, Agosto, 1901.)

Before going further I desire emphatically to affirm: That I was present when the question of following out Dr. Finlay's mosquito theory was brought up by the Army yellow fever board, as it was my right and duty to be, and as it is recorded in our Preliminary Note (reprint from the proceedings of the twenty-eighth annual meeting of the American Public Health Association, October, 1900). That, at that time, neither Drs. Reed, Carroll nor myself believed in said theory, the only one of us inclined to consider it favorably being my friend and classmate, Dr. Jesse W. Lazear. That the work in the lines of Finlay's theory was undertaken as a matter of course, from the fact that a thorough investigation into the etiology of yellow fever was expected of our board, and not because as a body the board thought any too well of it. That of us all, Dr. Lazear was the only one at the time prepared to initiate

the work in this direction, he being thoroughly familiar with the anatomy and biology of the culex and conversant with the technic required; he had already bred numerous varieties in his laboratory at Camp Columbia, and had been sending specimens to Dr. Howard, entomologist, Department of Agriculture, Washington, for aid in identifying the different species. That Dr. Lazear was the member of the board, Dr. Reed being absent in Washington, who produced our first two cases by the bites of mosquitoes, in the persons of Dr. Carroll, who, being an unbeliever, allowed him to apply one mosquito on August 27, and an American soldier, who was bitten by the same insect, and three others, Aug. 31, 1900. That Dr. Lazear, not content with this, and not in ignorance, for he had suggested to me what the origin of Carroll's and the soldier's infection was, deliberately allowed himself to be bitten by a mosquito while in one of the wards of the yellow fever hospital (Las Animas) September 13, at a time when Carroll and the soldier were convalescing from their attacks. I am convinced that this mosquito produced the infection which caused his death Sept. 25, 1900.

Major Reed was summoned from Washington and the investigation was then undertaken exclusively on the mosquito theory.

These are the facts which I deem necessary to make known for the present.

No one can regret more than I the circumstances which may have led Dr. Finlay to regard the stand taken by the Army yellow fever board as a "tacit denial of his rights to priority"; but his false interpretation of our writings could have never induced me to demean the achievements of this "grand old man." Neither the Army board, Dr. Carroll, or anyone can deprive Dr. Finlay of the glory of his discovery. What matters it, and what wonder is it, that he could not impart to the near-sighted all that he knew, when we consider that he lacked the necessary technical training and the material means which were so bountifully placed at our disposal for the demonstration? If he did not indeed convince us at the time that the mosquito was the only means of propagating the disease, are we not convinced of it to-day? And is it not the same mosquito to which he pointed?

Had we followed out his suggestions for clearing the city of yellow fever (*New York Medical Record*, May 27, 1899), and which were later put into practice with but little variation by Major Gorgas, the date of our liberation from the scourge would have been anticipated by three years.

Dr. Carroll says:

> It is too late, after facts have been proved and recorded by others, to claim priority unless one can point to unmistakable evidence in print as proof that the facts have been demonstrated and duly reported.

According to this, Dr. Finlay undoubtedly is entitled to priority; he demonstrated to himself and reported long ago the true facts of a fundamental principle, which the Army board, by its superior advantages, demonstrated more convincingly to the world. ARISTIDES AGRAMONTE, M.D.

### The Library of the El Paso County Medical Society.

DENVER, June 1, 1903.

*To the Editor:*—There are but few cities in the United States with a population of less than 25,000 that can boast of a medical library. I was, therefore, agreeably surprised to find one in a recent visit to Colorado Springs. It is housed in a separate alcove in the Corbin Library of the Colorado College. It contains over one thousand books, all arranged in alphabetical order by authors under the following classification: 1, Anatomy; 2, biographies; 3, chemistry; 4, dentistry; 5, gynecology; 6, hygiene; 7, history; 8, materia medica; 9, medical diagnosis; 10, medical jurisprudence; 11, medicine; 12, miscellaneous; 13, obstetrics; 14, pathology; 15, periodicals and reprints; 16, physiology; 17, reference books; 18, reports; 19, surgery; 20, veterinary. All medical journals are arranged alphabetically by titles. Reprints are filed in cases under an approximate classification by subjects. A card catalogue arranged by subjects is placed in the alcove, and an author's catalogue is placed in the card catalogue in the general librarian's office. The system of classification adopted by this library is unique in that all the subjects are arranged alphabetically. I find it very admirable for a small library. It looks odd at first to find dentistry flanked by chemistry and gynecology, and physiology between periodicals and reference works, but it certainly has its advantages. Once one knows that everything is arranged alphabetically he can easily find what he wants.

All this was surprising enough, but I noticed a neatly bound pamphlet dangling on a ribbon, across which I read the words, "Catalogue of the Library of the El Paso County Medical Society."

All the work, the arrangement, classification and cataloging was done, not by a hired librarian, but by a committee composed of busy practitioners, Drs. R. K. Hutchings, W. H. Swan, F. L. Dennis and H. W. Hoagland. This committee has done a noble work which the profession of Colorado Springs will come to appreciate more and more as years go by.

The library contains a few old books of interest to the lover of *curiosa*. John Friend's Emmenologia, 1752; Sydenham's works, 1740, and N. Robinson's "A New Method of Treating Consumption." There will be not a few who will be anxious to find out something about this "new method," now two hundred years old. I will therefore transcribe the full title of the book, which reads as follows:

> A new method of treating consumption, wherein all the decays incident to human bodies are mechanically accounted for. With some consideration touching the difference between consumption and other decays that naturally attend old age. To which are added arguments in defense of the possibility of curing ulcers of the lungs; as also reasons for demonstrating that the irregular discharges of all the evacuations in consumption arise from the resistance of the heart not decaying in a simple proportion to the resistance of other parts.

From the title one can gather hints as to the curious contents of the book. By the way, there is another book by the same Johnson on which I would like to spend a few hours, namely:

> A treatise on the virtues of a crust of bread, eat early in a morning fast, to which are added some particular remarks concerning the great cures accomplished by the saliva, or fasting spittle as when externally applied, or when internally given, in the scurvy, gravel, stone, rheumatism and diverse other diseases arising from obstruction.

Well, "the virtue of a crust of bread eat early in a morning fast" is an experiment with the effects of which legions are fully acquainted. But of "spittle" applied externally I have heard it used only in cases of violent emergencies and under provoking circumstances. C. D. SPIVAK, M.D.

## Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

### DO NEGROES RECOVER FROM PHTHISIS?

ATLANTA, GA., June 2, 1903.

*To the Editor:*—I see in THE JOURNAL (May 30, p. 1520) that Dr. Francis Crosson of New Mexico is desirious of information on tuberculosis among negroes. After fifteen years of large experience with tuberculosis among the negroes on the farm and in the towns, I can not recall a single case in which treatment made the slightest impression. Not only were all the cases fatal, but the negro succumbs most readily to the infection, and so rapid is the progress of the disease that death soon claims the victim. The peculiar hue of the negro's skin is almost an infallible characteristic of the disease. JOHN E. ASHCROFT.

CHATTANOOGA, TENN., June 2, 1903.

*To the Editor:*—In response to the request of Dr. Crosson of Albuquerque, New Mexico, I observe as follows: From a very extensive professional knowledge of the negro, both in public hospital work and in private practice, and covering a third of a century, I have come to the conclusion that the colored race, as we meet it in the south, is specially susceptible to the inroads of tuberculosis, primarily, and succumbs to this great white plague very rapidly. Indeed, I regard tuberculosis as one among the greatest of the foes of the African under civilization in the United States; and if one of this race ever recovered under my own observation, after contracting consumption, I certainly do not remember it now. With the profession generally in this southern section of our common country, it is a sentiment that when a negro becomes visibly affected with pulmonary phthisis his doom is already practically sealed, and there is a very short period expected to intervene between the

victim and his taking off as soon as a diagnosis becomes readily appreciable. E. A. COBLEIGH.

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MOBILE, ALA. June 3, 1903.

*To the Editor:*—Some years ago, while assistant superintendent of the Alabama Insane Hospital at Tuscaloosa, I availed myself of the excellent opportunity there offered of studying the relative frequency and curability of tuberculosis in the white and colored races, from both a clinical and pathologic standpoint. The results of my observations were published in the *New York Medical Journal*, Feb. 23, 1895, and may be epitomized as follows: The mortality from tuberculosis is greater in the negro race than in the white. The disease runs a more rapidly fatal course in the negro. General miliary tuberculosis is many times more frequent in the negro. Instances of arrest or cure of tubercular disease are comparatively rare in the negro. Nevertheless, recovery from tuberculosis is not unknown in negroes; I have known two cases.

E. D. BONDURANT.

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AGRICULTURAL COLLEGE, MISS., June 5, 1903.

*To the Editor:*—In answer to Francis Crosson's inquiry, I will say that I have known only one case to recover in a practice of 28 years. It is an almost unknown occurrence, and there are many dying in this country from tuberculosis. Tuberculosis with the negro before they were freed was almost unknown. Then they were fed well, clothed well, housed comfortably, made to keep regular hours, and when one was taken sick the very best nursing and medical attention was given him. The kind friends of the negro in the north who are anxious to help him with their money could do him no greater service than to provide a fund to be used in securing him good nursing and first-class medical attention when he is sick. They have one habit that I am not sure they had when slaves, viz., sleeping with their head covered; that adds much to cause this succumbing to tuberculosis.

W. H. BARR, M.D.

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## Marriages.

B. F. WALKER, M.D., Laton, Cal., at Winchester, Ill., May 26.

L. MAE JAMES, M.D., to JOHN J. HOUTON, M.D., both of Detroit, Mich., June 2.

A. C. ECKE, M.D., Chicago, to Miss Sadie Beaman of Fond du Lac, Wis., May 31.

CHARLES EDWARD TERRY, M.D., to Miss Marion Stuart, at Annapolis, Md., May 29.

FRED CLIFTON HONNOLD, M.D., Riverside, Ill., to Miss Aimee Coulter of Chicago, June 10.

DAVID M. MCFALL, M.D., Mattoon, Ill., to Miss Fannie Johnson of Quincy, Mass., June 3.

ROWLAND MCFARLAND, M.D., to Miss Maude Elena La Fergey, both of Daggett, Cal., April 14.

MARION RUSSELL THOMAS, M.D., Savannah, Ga., to Miss Ethel Ray Butler of Baltimore, June 9.

CLAUDE ALLEN THOMPSON, M.D., to Miss Harriett Pauline Shoenfelt, both of Muskogee, I. T., May 24.

ARTHUR G. KESSLER, M.D., Lyons, Cook County, Ill., to Miss Mary L. Barnum, at Waukegan, Ill., May 20.

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## Deaths.

**Timothy Barnard Chisholm, M.D.** Atlanta (Ga.) Medical College, 1861, acting assistant surgeon in the Confederate service; for many years county physician and coroner; a member of the Medical Association of Georgia and of the Georgia Medical Society of Savannah, died at his home in that city, May 7, after an illness of three days, aged 63.

**John Newton Dexter Shinkel, M.D.** Rush Medical College, Chicago, 1885, a member of the American Medical Association, Mississippi State Medical Association, Mississippi State Board of Health, Tri-State Medical Association; vice-president International Association of Railway Surgeons, 1899-1890; died suddenly at his home in Friar Point, Miss., May 26.

**John B. Burdett, M.D.** College of Physicians, New York, 1856, for several years president of the Hudson County (N. J.) Medical Society and once president of the Hudson County Pathological Society, died at his home in Jersey City, May 21, from Bright's disease, after an illness of three years, aged 69.

**Andrew Louden Chapman, M.D.** St. Louis Medical College, 1857, died from heart disease, May 15, at his home in Kansas City, Mo., after a long illness, aged 77. He was at one time the editor and publisher of the *New Medical Era and Sanitarium*. He retired from active practice in 1882.

**Eliphalet L. Patee, M.D.** Starling Medical College, Columbus, Ohio, 1852, surgeon during the Civil War; surgeon-general of Kansas, 1892-1894, member of the Association of Military Surgeons of the United States, died recently at his home in Manhattan, Kan.

**Philip H. Keyser, M.D.** Chicago Homeopathic Medical College, 1893; Colorado School of Medicine, Boulder, 1902, a member of the American Medical Association, was found dead at his home in Boulder, May 24, aged 31. Autopsy revealed no cause.

**William O. Davies, M.D.** captain and assistant surgeon U. S. V., a graduate of the University of Pennsylvania, died at his home in Philadelphia, May 26, after a long illness contracted during his service in the Philippine Islands, aged 36.

**Dwight Scott Chamberlain, M.D.** New York University, 1862, surgeon during the Civil War, but since 1868 engaged in the law and banking business, died at his home in Lyons, N. Y., May 11, from typhoid fever, after a long illness, aged 64.

**Hiram Henry Bingham, M.D.** College of Homeopathic Medicine and Surgery of the University of Minnesota, 1896, of Herman, Minn., died in Minneapolis, May 8, from tuberculosis of the intestines, after an illness of two years, aged 28.

**Charles F. Hamlin, M.D.** Medical School of Maine, Bowdoin College, Brunswick, 1892, a member of the American Medical Association, died at his home in Medway, Mass., May 16, from pneumonia, after an illness of two weeks, aged 34.

**Albert N. Robert, M.D.** Bellevue Hospital Medical College, New York, 1897, died suddenly from heart disease on the train while returning from his old home in Holyoke, Mass., to his home in Volcano, Cal., May 5, aged 29.

**Gustave Boucher, M.D.** Royal University of Naples, Italy, 1864, of South Brooklyn, N. Y., died in the Columbus Hospital, Manhattan, May 21, from locomotor ataxia, after an illness of two years, aged 57.

**George Osgood Hildreth, M.D.** Transylvania University, Lexington, Ky., 1835, the oldest practitioner of Marietta, Ohio, died at his home in that place, May 3, after an illness of four months, aged 90.

**W. M. Willingham, M.D.** Atlanta (Ga.) Medical College, 1874, died suddenly, May 12, near his home in Crawford, Ga. He had represented Oglethorpe County for several years in the legislature.

**Bernard C. Nunez de Villavicencio, M.D.** University of Pennsylvania, Philadelphia, 1865, formerly of Galveston, Texas, died at his home in New Orleans, May 21, after a brief illness, aged 64.

**Mark T. Loope, M.D.** Baltimore Medical College, 1893, surgeon of the Northern Pacific Railway, at Hope, Idaho, died in a hospital at Spokane, Wash., May 22, after a brief illness, aged 46.

**John Van Harlingen, M.D.** College of Physicians and Surgeons, New York, 1869, died at his home in Brooklyn, N. Y., May 17, from heart disease, after an illness of four months, aged 57.

**Henry Klemm, M.D.** St. Louis College of Physicians and Surgeons, 1882, died at his home in St. Louis, May 24, after an illness of three months, following an attack of influenza, aged 61.

**Nicholas Pfeifer, M.D.** Penn Medical University, Philadelphia, 1863, surgeon during the Civil War, died at his home in Lindenhurst, Long Island, N. Y., May 24, after a long illness, aged 83.

**Max J. Reinhold, M.D.** Hahnemann Medical College, Philadelphia, 1879, died from hemorrhage of the stomach at his home in Williamsport, Pa., after a long illness, May 12, aged 47.

**Thomas H. Mathers, M.D.** Medical College of Ohio, Cincinnati, 1883, of Lillovet, B. C., died from septicemia following frozen feet, at New Westminster, B.C., April 16, aged 45.

**Samuel S. Scott, M.D.** Medical College of Ohio, Cincinnati, 1854, a surgeon in the Confederate service during the Civil War, died at his home in Erlanger, Ky., May 22, aged 77.

**Waller Overton Bullock, M.D.** Bellevue Hospital Medical College, 1869, died at his home in Lexington, Ky., May 18, from paralysis, after an invalidism of four years, aged 61.

**Joseph B. Cutts, M.D.** Medical School of Maine, Bowdoin College, Brunswick, 1842, an early settler of Polo, Ill., died at the home of his son in St. Louis, May 18, aged 83.

**Thomas B. Ennor, M.D.** State University of Iowa, Iowa City, 1888, of Potosi, Wis., died at Phoenix, Ariz., April 27, from tuberculosis, after an illness of one year, aged 40.

**Arthur A. Blondin, M.D.** Northwest Medical College, St. Joseph, Mo., 1892, of Alturas, Cal., died at a hospital in San Francisco, April 28, from heart disease, aged 62.

**Henry D. Belden, M.D.** University of Vermont, Burlington, 1877, a veteran of the Civil War, died from locomotor ataxia at his home in St. Albans, Vt., May 21, aged 57.

**John R. Van Horn, M.D.** Georgia School of Eclectic Medicine and Surgery, Atlanta, 1894, died at his home in Clay City, Ind., May 23, after an illness of six weeks, aged 42.

**John K. Ruffin, M.D.** University of Pennsylvania, Philadelphia, 1857, who had been in feeble health for some time, died suddenly at his home in Wilson, N. C., May 23.

**William R. Irons, M.D.** Jefferson Medical College, Philadelphia, 1890, died at his home in Allegheny, Pa., from pneumonia, May 24, after an illness of four days, aged 42.

**Asa E. Hoskinson, M.D.** Starling Medical College, Columbus, Ohio, 1883, died at his home in Columbus, May 19, from pneumonia, after an illness of two weeks, aged 45.

**James I. Lamar, M.D.** Medical College of Georgia, Augusta, 1851, died at his home in Deatsville, Ala., May 11, from pneumonia, after an illness of six weeks, aged 73.

**John Moffett, M.D.** Medical College of Ohio, 1849, several times president of the Rush County Medical Society, died at his home in Rushville, Ind., May 1, aged 81.

**Charles Cochran, M.D.** Willoughby (Ohio) University, 1843, for many years a resident at Toledo, died, May 25, at the home of his daughter in Los Gatos, Cal., aged 86.

**John Nelson McCune, M.D.** Cleveland Medical College, 1878, died at his home in McKeesport, Pa., May 17, from dropsy, after an illness of four months, aged 52.

**James M. Park, M.D.** Eclectic Medical Institute, Cincinnati, 1871, of Little Rock, Ark., died suddenly while driving near Scott's Crossing, Ark., May 15, aged 51.

**Joseph N. B. Latimer, M.D.** College of Physicians and Surgeons, Baltimore, 1879, died at his home near T. B., Prince George's County, Md., May 18, aged 48.

**Tyson Smith, M.D.** Homeopathic Hospital College, Cleveland, 1881, formerly of Newaygo, Mich., died at the Michigan State Hospital, Kalamazoo, May 11, aged 55.

**Ephraim M. Fine, M.D.** Medical College of Ohio, Cincinnati, 1872, died at his home in Veedersburg, Ind., May 17, from paralysis, after a brief illness, aged 59.

**Joseph T. Moreland, M.D.** Chattanooga (Tenn.) Medical College, 1901, of Atlanta, Ga., died at a sanitarium in that city, May 22, after a short illness, aged 56.

**James E. Hyslup, M.D.** University of Maryland, Baltimore, 1900, died at his home in Keller, Va., May 18, from pneumonia, after an illness of six days, aged 27.

**William L. Funderburg, M.D.** Southern Medical College, Atlanta, Ga., 1883, committed suicide, by taking morphin at his home in Gadsden, Ala., May 12.

**Alvin B. Rice, M.D.** Bellevue Hospital Medical College, New York, 1867, died suddenly from heart disease, at his home in Jamestown, N. Y., May 7, aged 61.

**A. M. Gontner, M.D.** Jefferson Medical College, 1878, of York, Pa., died at the York Hospital, May 17, from septicemia, due to an abscess of the foot, aged 47.

**Carl Steiger, M.D.** University of Munich, Germany, 1887, died at his home in Monroe, Wis., May 7, from toxemia, after an illness of four days, aged 42.

**Clifford J. Hickman, M.D.** Eclectic Medical Institute, Cincinnati, 1889, died at his home in South Bend, Ind., May 8, after an illness of one week, aged 35.

**Edgar T. Schmidt, M.D.** Jefferson Medical College, Philadelphia, 1876, died suddenly in his office in St. Paul, Minn., from heart disease, May 17, aged 48.

**Robert M. Enders, M.D.** Tulane University, New Orleans, 1869, captain and assistant surgeon, U. S. V., died in Manila, P. I., May 26, from nephritis.

**James T. Warnock, M.D.** Jefferson Medical College, Philadelphia, 1858, died suddenly from heart disease, May 9, at his home in Atlanta, Ga., aged 68.

**Raymond W. Shattuck, M.D.** College of Physicians and Surgeons, New York, 1897, school inspector, died at his home in New York, April 27, aged 29.

**John J. Healy, M.D.** University of Pennsylvania, Philadelphia, 1872, died suddenly from heart disease at his home in Philadelphia, May 7, aged 53.

**Robert B. McCants, M.D.** Southern Medical College, Atlanta, Ga., 1882, died at his home in Demopolis, Ala., May 28, after an illness of two days, aged 45.

**Andrew J. Sauer, M.D.** Baltimore Medical College, 1894, died at his home in Baltimore, May 20, from typhoid fever, after an illness of 33 days, aged 30.

**Silas E. Farnsworth, M.D.** University of Vermont, Burlington, 1867, died at his home in Minneapolis, May 21, from chronic nephritis, aged 65.

**William L. Kirkpatrick, M.D.** Medical College of the State of South Carolina, Charleston, 1850, died at his home in Anniston, Ala., May 3, aged 76.

**John F. Cronin, M.D.** Medical College of Georgia, Augusta, 1890, of Augusta and New York City, died from tuberculosis at Daytona, Fla., May 23.

**E. P. Stearns, M.D.** Eclectic Medical Institute, Cincinnati, 1858, assistant surgeon in the Civil War, died recently at his home in Newton, Kan.

**Ralph Morden, M.D.** New York Homeopathic Medical College, 1875, died at his home in Circleville, Ohio, from Bright's disease, May 12, aged 50.

**William G. Mott, M.D.** College of Physicians and Surgeons, Keokuk, Iowa, 1878, died at his home in Basco, Ill., from smallpox, May 5, aged 60.

**Robert L. Browning, M.D.** Eclectic Medical Institute, Cincinnati, 1882, died suddenly from apoplexy at his home in Judsonia, Ark., May 6.

**Edward M. Kanouse, M.D.** Hahnemann Medical College, Chicago, 1880, of Wausau, Wis., died at Three Rivers, Wis., May 25, aged 60.

**James F. Rawlings, M.D.** Medical College of Ohio, Cincinnati, 1891, died from brain disease at his home in Eldorado, Ill., May 13, aged 34.

**Joseph A. Schaeffer, M.D.** University of Wooster, Cleveland, 1887, of Ashtabula, Ohio, died in the Cleveland State Hospital, April 30.

**Adolph O. Schoeninger, M.D.** College of Physicians and Surgeons, Baltimore, 1902, died, May 4, at his home in Newark, N. J., aged 24.

**E. W. Dean, M.D.** Cleveland Homeopathic Medical College, died from consumption at Colorado Springs, Colo., the first week in May.

**Charles T. Hudson, M.D.** Tulane University, New Orleans, 1882, died at his home in Yazoo City, Miss., May 21, after a short illness.

**Robert M. Cochran,** M.D. Medical College of Virginia, Richmond, 1865, died, May 8, at his home in Martin's Station, Ala., aged 62.

**John A. Bitting, M.D.** Jefferson Medical College, Philadelphia, 1874, died suddenly at his home in Sherman, Texas, May 14, aged 50.

**John A. Robinson, M.D.** Jefferson Medical College, Philadelphia, 1868, died suddenly at his home in Due West, S. C., May 25.

**Frederick E. Baxter, M.D.** Bennett Medical College, Chicago, 1883, died at his home in Petersburg, Neb., April 30, from cancer.

**Samuel H. Thompson, M.D.** University of Tennessee, Nashville, 1892, of Arlington, Texas, died, May 20, at Albany, Texas.

**Benjamin R. Mosher, M.D.** American Medical College, St. Louis, 1891, died at his home in Kinsley, Kan., May 2, aged 73.

**John I. Dyer, M.D.** National Medical College, Washington, D. C., 1847, died at his home in Washington, May 9, aged 76.

**James F. Richards, M.D.** College of Physicians and Surgeons, New York, 1859, died recently at his home in Andover, Mass.

**Alphonso S. Wilson, M.D.** University of Pennsylvania, Philadelphia, 1892, died at his home in Wilkesbarre, May 27.

**Abraham Standlee, M.D.** American Medical College, Cincinnati, 1857, died at his home in Santa Anna, Texas, May 2.

**George W. Noble, M.D.** Eclectic Medical Institute, Cincinnati, 1854, died at his home in Edon, Ohio, May 4, aged 80.

**Frederick A. Krill, M.D.** Homeopathic Hospital College, Cleveland, 1882, died recently at San Luis Obispo, Cal.

**Edmund B. Myers, M.D.,** Pennsylvania, died suddenly at his home in York, Pa., from apoplexy, May 13, aged 73.

**Henry M. Beer, M.D.** Cleveland Medical College, 1868, died at his home in Valparaiso, Ind., May 26, aged 65.

**J. H. Bryant, M.D.** College of Medicine and Surgery, Philadelphia, 1849, died at Waterloo, Iowa, April 27.

**B. Frank Klugh,** M.D. of Florin, Pa., was injured in a railway accident, May 13, and died, May 16, aged 61.

**J. F. Couch, M.D.,** a pioneer of Upshur County, Texas, died at his home in Simpsonville, May 7, aged 85.

**Thomas H. Rye, M.D.** University of Nashville, 1859, died at his home in Turbine, Tenn., May 26, aged 74.

**Charles H. Blair, M.D.** Bennett Medical College, Chicago, 1895, died at Beloit, Wis., May 17, aged 46.

**Houston D. Shrader, M.D.,** Washington, D. C., died at Sibley Memorial Hospital, May 21, aged 52.

**Isaiah Bowers, M.D.,** died from dropsy, April 28, at his home in Plymouth, Ind., aged 70.

**James D. Donnelly, M.D.** died at his home in Mountain City, Tenn., May 21, aged 75.

**B. A. Tinsley, M.D.,** died at his home in Lawrenceburg, Tenn., May 11.

## Book Notices.

A TEXT-BOOK OF DISEASES OF THE EYE. A Handbook of Ophthalmic Practice for Students and Practitioners. By G. E. de Schweinitz, A.M., M.D., Professor of Ophthalmology in the University of Pennsylvania, etc. Fourth Edition, Revised, Enlarged, and Entirely Reset. With 280 Text-Illustrations and 6 Chromo-lithographic Plates. Cloth. Pp. 773. Price, $5.00 net. Philadelphia and London: W. B. Saunders & Co. 1903.

De Schweinitz's well-known work on diseases of the eye appears in the fourth edition with numerous changes and additions bringing it well up to date. Much new matter has been added and certain chapters, such as those on refractions, movements of the eyeballs and others, have been considerably rewritten. The work will retain the favor which it has received from the profession.

THERAPEUTICS OF DRY HOT AIR. By Clarence Edward Skinner, M.D., LL.D., New Haven, Conn., Professor of Thermotherapy in the New York School of Physical Therapeutics. Cloth. Pp. 200. Price, $2.00. New York: A. L. Chatterton & Co.

The subject of this work is one that is likely to interest the practitioner more in the future than it has in the past, for the method advocated seems to have advantages and to have acquired at least a standing in therapeutics. The book gives the best side of the treatment, not, however, without mentioning its limitations. The criticism of the book that we should make is first of all that it does not with sufficient completeness and definiteness describe the mechanism of the apparatus. The illustrations given convey a general idea of its appearance and to a certain extent of its mode of working, but on looking over the work we have been unable to find anything as to the possibilities of its utilization in private practice at the bedside in the absence of gas jets, even indeed if it is practicable where they are available.

ANATOMY AND HISTOLOGY OF THE MOUTH AND TEETH. By I. Norman Broomell, D.D.S., Professor of Dental Anatomy, Dental Histology, and Prosthetic Technics in the Pennsylvania College of Dental Surgery, Philadelphia. Second Edition, Revised and Enlarged, with 337 Illustrations. Cloth. Pp. 500. Price, $4.50 net. Philadelphia: P. Blakiston's Son & Co. 1902.

This is a text-book for dental students, and is thoroughly up to date. The illustrations include microphotographs from actual specimens as well as photographs of dissections. The author enters into a general description of the mouth and surrounding tissues. The occlusion of the teeth receives considerable attention, although that in itself is of minor importance, since the etiology of occlusion is entirely neglected, the manner and arrangement of the teeth in the line of evolution and atavism being an essential point. About one hundred and fifty pages are devoted almost entirely to the anatomy of the teeth. The histology of the structures of the mouth are entered into at considerable length. This work would be of more value if the first part had been devoted to the evolution of the pulps and the teeth. The evolution of the face, jaws and teeth should be well fixed in the mind of the student before he undertakes the study of the present condition of man, as nearly all diseases which the dentist is called on to treat are the result of evolution. The work as a whole is a commendable one. In one or two instances, the author has failed to give credit for illustrations. This, however, was no doubt an oversight. The work is finely produced with clear large type, and is well indexed.

A SYSTEM OF PHYSIOLOGIC THERAPEUTICS. A Practical Exposition of the Methods, Other Than Drug Giving, Useful in the Prevention of Disease and in the Treatment of the Sick. Edited by Solomon Solis-Cohen, A.M., M.D., Senior Assistant Professor of Clinical Medicine in Jefferson Medical College. Volume V. Prophylaxis—Personal Hygiene—Civic Hygiene—Care of the Sick. By Joseph McFarland, M.D., Henry Leffmann, M.D., Albert Abrams, A.M., M.D., and W. Wayne Babcock, M.D. Illustrated. Cloth, Pp. 539. Price, $27.50 per set. Philadelphia: P. Blakiston's Son & Co. 1903.

Part 1, by Drs. McFarland and Babcock, discusses the origin and prevention of disease, considering the intrinsic factors which tend to increase or decrease the tendency to disease, such as age, race, heredity, etc. The extrinsic causes are similarly treated under the heads of physical, toxic and sociologic causes, in which a great deal of space is given, profitably, to the different forms of animal and vegetable parasites. Part 2, by Dr. Leffmann, treats of civic hygiene, including chapters on hospitals for contagious diseases, the control of venereal disease, the regulation of water, milk and food supply, the disposal of waste material and the disposal of the dead by burial and cremation. Part 3, by Dr. Abrams, includes such important topics as the hygiene of dwellings; the hygiene of travel; personal hygiene; the hygiene of special periods, beginning with infancy; the hygiene of the diatheses as scrofula, rachitis, scorbutus, etc. The last two chapters are devoted to the care of the sick room and the patient, including a chapter on special nursing. The book includes many helpful suggestions which should be in the possession of every active practitioner. This volume keeps up the reputation of this series in the treatment of subjects in a practical manner.

## Association News.

### New Members.

New members for the month of May, 1903:

ALABAMA.

Williamson, J. L., Tuscaloosa.
Faulk, W. M., Tuscaloosa.
Camp, E. T., Gadsden.
LeGrande, J. C., Birmingham.
Sellers, H. G., Birmingham.
Whaley, Lewis, Birmingham.
Andrews, Glen, Montgomery.
Dupree, W. J., Athens.
Furniss, H. D., Selma.
Gaston, J. L., Montgomery.
Hamrick, R. H., Pratt City.
Hand, S. P., Demopolis.
Hicks, L. O., Jackson.
Knowlton, J. W., Paint Rock.
Mohr, C. A., Mobile.
McWhorter, H. P., Collinsville.
Mershon, Clarence L., Fairhope.
Marlette, C. E., Hayneville.
Robinson, T. F., Bessemer.
Schowalter, V. McR., Point Clear.
Wharton, W. W., Cullman.
Wright, W. I., Dawson.
Woodcock, Burgett, Vinegar Bend.
Parker, E. T., Brewton.
Somerville, W. G., Tuscaloosa.
Lacey, E. P., Bessemer.

ARKANSAS.

Minor, J. C., Hot Springs.
Collings, H. P., Hot Springs.
Thompson, M. G., Hot Springs.
Clegy, J. T., Siloam Springs.
Hurley, C. E., Bentonville.
Lutterloh, C. M., Jonesboro.
Thompson, R. C., Pine Bluff.
White, J. A., Dumas.
Westerfield, J. H., Atkins.
Wells, D. D., Hazen.
Burton, O. H., Hot Springs.
McCollum, I. N., Greenbrier.

CALIFORNIA.

Adams, F. L., Oakland.
Lazard, E. M., Los Angeles.
Paul, J. W., Santa Clara.
Schmitt, Lionel S., San Francisco.
Crabtree, Hezediah T., San Francisco.
Bailly, T. E., San Francisco.
Stafford, O. R., Santa Ynez.

CONNECTICUT.

Burroughs, Geo. McC., Madison.
Segur, Gideon C., Hartford.
Moriarty, Jas. L., Waterbury.
Kilmartin, Thos. J., Waterbury.

DISTRICT OF COLUMBIA.

Brown, H. L., Washington.
Sutton, Richard L., Washington.
Wilkinson, Oscar, Washington.

FLORIDA.

Thomason, Frank G., Kissimmee.

GEORGIA.

Miller, B. E., Daisy.
Hendricks, W. H., Tifton.
Alexander, W. H., Blakely.

ILLINOIS.

Waters, O. J., Chicago.
Smyth, J. P., Chicago.
Hardon, Robt. W., Chicago.
Duff, Guy C., Chicago.
Bartlett, Rufus H., Chicago.
Simpson, Elmer E., Chicago.
Harris, Frederick G., Chicago.
Alcorn, Archibald J., Chicago.
Dohrmann, Geo., Chicago.
Goldsmith, A. A., Chicago.
Doane, P. S., Chicago.
Gottschalk, F. B., Chicago.
Gray, Ethan A., Chicago.
Darling, C. G., Chicago.
Aiken, A. W., Chicago.
Albro, Merlin Z. Chicago.
Hopkins, Caroline B., Chicago.
O'Byrne, Chas. C., Chicago.
Masilko, V. F., Chicago.
Keyes, A. Belcham, Chicago.
Voyles, Chas. F., Murdock.
Pearson, Jas. J., Pontiac.
Hardesty, T. O., Kampsville.
Franing, E. C., Galesburg.
Dicks, T. A., Broadlands.
Baysinger, M. M., Grand Tower.
Hanna, Robt. A., Peoria.
Berry, R. D., Springfield.
Mitchell, H. C., Carbondale.
Foley, John C., Waukegan.
Davidson, W. P., Sullivan.
Davis, C. E., Peoria.
Smith, Isaac Newton, Toluca.
Smith, D. G., Elizabeth.
See, Clarence S., Pleasant Mound.
Denny, Alden Ray, Galesburg.
Galbraith, Robt. G., Matteson.
Taylor, Leonard S., Elgin.

INDIANA.

Thompson, G. W., Winimac.
McKinney, J. W., Bluffton.
McDonald, W. B., New Augusta.

Hoover, P. N., Boonville.
Hershey, K. C., Carmel.
Cummings, David J., Brownstown.
Morrison, Frank A., Indianapolis.
Patton-Hawkins, Madge, Terre Haute.
Durham, Chas. O., Indianapolis.
Crockett, Lillian A., Indianapolis.
Lawson, W. T., Danville.
Frick, H. C., Evansville.
Clark, Edmund D., Indianapolis.

INDIAN TERRITORY.

Ross, S. P., Savannah.

IOWA.

Brink, H. J., Doon.
Powers, J. C., Hampton.
Hostetler, Calvin, Marcus.
Evans, R., Ft. Dodge.
Stevens, E. Luther, Des Moines.

KANSAS.

Chilcott, B. F., Osborne.
Hausman, Jacob L., Marysville.
McVey, Wm. E., Topeka.
Andrews, A. S., Topeka.
Williams, Wm., Pittsburg.
Williams, G. W., Pittsburg.

KENTUCKY.

Boggs, Jas. P., Robbins.
Combs, Glenmore, Winchester.
Prewitt, Nelson V., Winchester.
Dunn, J. T., Louisville.
Thomas, F. P., Hopkinsville.
Heflin, Ernest Lee, Louisville.
Finley, Thos. R., St. Charles.
Hayden, John V., Salem.
Jackson, J. B., Hopkinsville.
Warren, Manley C., Buchanan.
Woodard, Robt. L., Hopkinsville.
Berry, W. T., Oakton.
Beard, Frank M., Shelbyville.
Cissell, Jos. K., Loretto.
Carson, Jas. O., Bowling Green.
Davenport, Edw., Hampton.
Dempster, R. T., Glendeane.
Hocker, Robt. T., Arlington.
LaRue, F. G., Smithland.

LOUISIANA.

Williams, W. T., Natchitoches.
Wilkins, H. F., Rayville.
Tolson, F. R., Lafayette.
Tircuit, A., Anchor.
Thompson, E., Ville Platte.
Sartor, D. R., Alto.
Sitman, C. M., Greensburg.
Simmons, C. D., Baton Rouge.
Smith, Ernest H., Lacour.
Powers, E. O., Grangeville.
Pierson, Clarence, Alexandria.
Postell, L. T., Plaquemine.
Matthews, W. W., Cheval.
McCaleb, J. H., Merrick.
Longino, Luther, Minden.
Lehmann, Victor, Hahnville.
Lawrence, Walter S., Yellow Pine.
Littell, B. A., Opelousas.
Jones, P. H., Lutcher.
Jones, Geo. M., Lutcher.
Kimball, John L., Caspiana.
Irion, C. H., Benton.
Huckabay, G. M., Vivian.
Hadra, Frederick, Ft. St. Philip.
Heard, Jas. Preston, Gueydan.
Holloway, Eugene, Plaquemine.
Hargrove, J. B., Natchitoches.
Gaines, G. W., Milliken's Bend.
Grace, W. L., Plaquemine.
Ellis, J. H., Kentwood.
Duchein, C. F., Lecompte.
Cushman, M. R., Abbeville.
Carruth, R. McG., New Roads.
Colvin, S. I., Minden.
Cannon, G. E., Jonesboro.
Biener, Geo., Port Allen.
Bush, A. R., Sligo.
Allen, J. C., Baton Rouge.
Bascom, Henry, Gueydan.
Walmsley, R. W., New Orleans.
Thiberge, N. F., New Orleans.
Sauter, C. F., New Orleans.
Schmittle, Jos., New Orleans.
Seay, R. W., New Orleans.
Richardson, T. F., New Orleans.
Robin, E. A., New Orleans.
Rudolf, T. R., New Orleans.
Patton, G. F., New Orleans.
Newman, J. W., New Orleans.
Mayer, A. J., New Orleans.
Lowe, E. P., New Orleans.
Loeber, Fred, New Orleans.
Lewis, H. S., New Orleans.
Ledoux, Alexander, New Orleans.
Kelly, Hugh, New Orleans.
Granger, Amedie, New Orleans.
Formento, Felix, New Orleans.
Danna, Jos. A., New Orleans.
Catalano, W., New Orleans.
Bayon, H., New Orleans.
Abbott, Louis Lee, New Orleans.
Surghnor, Graham, Monroe.
Roussel, W. D., Patterson.
Wilson, J. L., Alexandria.
Williams, R. L., New Orleans.
Singletary, T. P., Baton Rouge.
Stone, Russell E., Amite City.
Scott, Jos. T., New Orleans.
Riche, H. Guy, Devall.
Mayile, A. G., New Orleans.
Logan, G. King, New Orleans.
King, Henry Allen, New Iberia.
Hopkins, Ralph, New Orleans.
Hunter, J. I., New Orleans.
Hart, J. B., New Orleans.
Fossier, A. E., New Orleans.
Duggan, T. A., New Orleans.
DePorter, L., New Orleans.
Dempsey, J. G., New Orleans.
Chamberlain, L. C., New Orleans.
Archinard, J. J., New Orleans.
Batchelor, J. M., New Orleans.
Nothacker, Wm., New Orleans.
Archinard, L. D., New Orleans.
Robin, W. H., New Orleans.
Hackett, R. K., New Orleans.
Ernst, O. F., New Orleans.
Charbonnet, L. S., New Orleans.
Couret, Maurice, New Orleans.
Gelbke, Chas. F., Gretna.
Girard, F. E., Lafayette.
Barrow, A. F., St. Francisville.
Houston, E. L., Koran.
Thompson, F. M., Slaughter.
Peters, J. J., Winnfield.
Davies, Edw., Mansfield.

MARYLAND.

Hirshberg, L. K., Baltimore.
Zepp, Jas. A., Baltimore.
Wailes, H. S., Cumberland.
Bevan, Chas. F., Baltimore.

MASSACHUSETTS.

Allen, Horatio C., New Bedford.
Hills, Chas. E., South Natick.

MICHIGAN.

Brooks, Harriet V. Bills, Saginaw.
Cameron, Duncan A., Alpena.
Gillam, Arthur C., Escanaba.
Martin, Jas. B., Traverse City.
Irvine, Geo. W., Detroit.
MacNaughton, Peter D., Calumet.
Jamieson, Robt. A., Detroit.
Schorr, Robt. L., Detroit.
Kirker, Geo. A., Detroit.
Acker, Wm. F., Monroe.
Fenelon, M. P., Escanaba.
Kitchen, A. S., Rapid River.
McGregor, Robt. N., Saginaw.
Moon, Wm. E., Traverse City.
Rees, Geo. M., Calumet.

MINNESOTA.

Ringnell, Carl John, Minneapolis.
Stuhr, Henry C., Argyle.
Graham, Christopher, Rochester.
Woodard, F. R., Minneapolis.

MISSISSIPPI.

Howard, W. L., Kosciusko.
Bolton, W. T., Biloxi.
Davis, W. V., Booneville.
Donald, J. D., Hattiesburg.
Noblin, W. E., Yazoo City.
Seale, J. E., Meridian.
Smythe, J. D., Greenville.
Scott, Jr., Z. J., Winona.
Lucas, J. W., Moorehead.
Beekman, Philip, Natchez.
Barber, T. A., Meridian.
Bass, C. C., Columbia.
Beacham, Woodard D., Felder.
Flowers, E. W., McComb.
Haralson, J. J., Forest.
Hunter, G. S., Bolton.
Mohler, D. G., Mt. Olive.
Murry, Chas. Miller, Ripley.
Pou, Jas. G., Courtland.
Turner, Osborn M., Jackson.
Thompson, Robt. W., Lumberton.
Wymer, J. J., Biloxi.

MISSOURI.

Ellis, Adam D., Powersville.
Harnisch, Henry J., St. Louis.
Vogt, Wm. H., St. Louis.
Goodwin, E. J., St. Louis.
Knott, Jr., Isaiah, Kytesville.
Cadwallader, I. H., St. Louis.
Friedman, Jacob, St. Louis.
Long, J. M., St. Louis.
Miller, J. M., Montrose.

NEW MEXICO.

Bradley, Chas. H., Las Vegas.

NEW YORK.

Hoffman, Chas. Fisher, Bolivar.
Brownell, Mary Alice, Newark.
Baker, Sara Josephine, New York.
Kammerer, Fred, New York.
Laighton, Florence Marion, New York.
Kimball, Chas. C., Watertown.
Robinovitch, Louise G., Watertown.
Warnecke, Anna, Newark.
Slawson, John C., Nyack.
Rogers, Willard H., New York.
Ehlers, Edw. C., New York.
Barnesby, Norman, New York.
Clayton, Mary, Ogdensburg.
Knapp, Hiram L., Newark Valley.
Blair, A. McN., Buffalo.

NORTH CAROLINA.

Boddin, N. P., Durham.
Reed, G. W., Biltmore.
Register, E. C., Charlotte.

OHIO.

Tuckerman, J. E., Cleveland.
Dennis, Chas. D., Columbus.
Campbell, A. D., Cleveland.
Post, Silas B., Canton.
Hatcher, H. H., Dayton.
Stewart, C. E., Toledo.
Shields, Percy, Cincinnati.
Melchers, Edward, Toledo.
Henry, Frank R., Dayton.
Corey, Martha D., Marion.

PENNSYLVANIA.

Skinner, W. F., Chambersburg.
Milnor, Mahlon T., Warrensville.
Frederick, W., Elliott.
Campbell, Chas. L., Sheradenville.
Buehler, W. S., Wernersville.
Pringle, W. N., Johnstown.
Mayer, L. H., Johnstown.
Hechelman, Herman W., Allegheny.
Hoffman, J. Louis, Ashland.
Freudenberger, Katrina, Tamaqua.
Bray, H. A., Philadelphia.
Smith, Lewis Watson, Pittsburg.

SOUTH CAROLINA.

McConnell, Henry E., Chester.
Monsen, M. B., Luray.
Hamilton, J. H., Union.
Hines, Edgar A., Seneca.

TENNESSEE.

Roberts, Deering J., Nashville.
Jacobsohn, Hiram B., Memphis.
Sewell, J. A., Rockwood.
Rawlins, Jas. S., Dancyville.
Kinsey, L. E., Ducktown.
Henderson, R. G., Memphis.
Crooks, Jere Lawrence, Jackson.
Black, Wm. T., Memphis.
Burch, L. E., Nashville.
Rogers, H. A., Ducktown.
Powell, Jas. L., Friendship.
Leake, R. M., Collierville.
Kimsey, Fred M., Ducktown.
Hanna, J. H., Covington.
Carroll, Jas. R., Henderson.
Rogers, W. B., Memphis.
Sanders, John F., Friendship.
Tinsley, P. A., Dandridge.
Jacobs, Arthur G., Memphis.
Worthington, Nathan J., Memphis.
Henderson, S. A., Bells.
Nichol, Adam Gillespie, Nashville.
Mathews, W. J., Johnson City.
Marr, Harrington, Nashville.
Wolff, H. S., Memphis.
Mooney, Chas. F., Knoxville.
Miller, Thos. F., Memphis.
Bryan, W. A., Nashville.
Maury, J. M., Memphis.
McNeil, E. K., Jackson.

TEXAS.

Smith, Allen J., Galveston.
Smith, O., Cumby.
Person, A. G., Snyder.
Nowlin, Bethel, Jonah.
Mason, Chas. F., Ft. Sam Houston.
Morris, Robt. S., Houston.
Benbrook, J. T., Rockwall.
Luter, Wm. E., San Antonio.
Cary, Edward Henry, Dallas.
Blount, Jr., E. A., Dallas.
Walker, A. C., Ft. Worth.
Lankford, J. S., San Antonio.
Harrell, T. M., Round Rock.
Chilton, W. E., Ft. Worth.

UTAH.

Kiehle, F. A., West Jordan.

VERMONT.

Pease, C. A., Burlington.

VIRGINIA.

Turner, Wm. D., Fergusson's Wharf.

WASHINGTON.

Shaw, E. E., Walla Walla.

WEST VIRGINIA.

Thomas, F. S., Charleston.
Preston, B. S., Pratt.
Pritchard, T. J., Huntington.

WISCONSIN.

Reeve, Jas. S., Appleton.
Roberts, John A., Manitowoc.
Harrington, T. L., Milwaukee.

HAWAII.

Schallie, Wm. A., Pohala.

## State Boards of Registration.

**California.**—The Board of Medical Examiners of the State of California met in San Francisco, April 7 to 8, 1903, and examined in 9 subjects, with 90 questions, 40 candidates, of whom 26 passed, 12 failed and 2 were conditioned. The examination was written and the percentage required was 75.

PASSED.

| Candidate. | Sch. of Pract. | College. | Year Grad. | Per Cent. |
|---|---|---|---|---|
| 250 | R. | University of Pennsylvania | 1902 | 84 2-9 |
| 258 | R. | Univ. Med. Coll., Kansas City | 1902 | 82 1-9 |
| 266 | R. | University of Cincinnati | 1899 | 87 2-3 |
| 282 | H. | University of Boston | 1889 | 90 8-9 |
| 286 | R. | University of Michigan | 1896 | 79 5-9 |
| 289 | R. | University of Michigan | 1895 | 82 2-9 |
| 251 | R. | Med. Dept. Univ. of California | 1902 | 90 |
| 255 | R. | Med. Dept. Univ. of New York | 1879 | 80 5-9 |
| 252 | R. | Medico-Chirurgical Coll., Phila. | 1902 | 75 4 9 |
| 254 | R. | College of P. and S., Chicago | 1902 | 82 2-3 |
| 265 | R. | Coll. of Phys. and Surgs., New York | 1880 | 83 5-9 |
| 284 | R. | Coll. of P. and S., San Francisco | 1902 | 88 2-9 |
| 259 | R. | Rush Medical College, Chicago | 1884 | 80 |
| 260 | R. | Fort Wayne Coll. of Med., Indiana | 1897 | 85 1-3 |
| 261 | R. | Vanderbilt University, Tennessee | 1902 | 85 8-9 |
| 264 | R. | Missouri Medical College | 1887 | 75 |
| 267 | H. | Hahnemann Hosp. Coll., San Fran. | 1901 | 87 |
| 268 | R. | Frederick William U., Berlin, Ger. | 1899 | 78 5-9 |
| 269 | R. | Howard Med. Coll., Dist. of Col. | 1902 | 81 5-9 |
| 272 | R. | McGill University, Montreal | 1890 | 88 2-3 |
| 279 | R. | Columbia University, New York | 1884 | * |
| 274 | R. | Royal Coll. of Surgs., London | 1896 | 90 2-3 |
| 276 | R. | Ohio Medical University | 1893 | 85 |
| 281 | R. | Woman's Medical Coll., Cincinnati | 1895 | 85 |
| 285 | H. | Homeopathic Medical Coll., Chicago | 1888 | 76 8-9 |
| 288 | H. | Hahn. M. C. of Pacific, San Fran. | 1902 | 78 8-9 |

* Previously conditioned in anatomy and pathology.

CONDITIONED.

| | | | | |
|---|---|---|---|---|
| 263 | H. | Hahnemann Med. Coll., Chicago | 1884 | †75 1-9 |
| 278 | H. | Hahnemann Med. Coll., Chicago | 1902 | ‡75 5-9 |

† Conditioned in physiology.
‡ Conditioned in physiology and pathology.

FAILED.

| | | | | |
|---|---|---|---|---|
| 253 | R. | Cleveland Medical College, Ohio... | 1892 | 51 2-3 |
| 256 | R. | Royal University, Parma, Italy.... | 1900 | 71 |
| 257 | R. | Washington University, Missouri... | 1895 | 60 7-9 |
| 262 | R. | Barnes Medical College, St. Louis.. | 1898 | 68 7-9 |
| 270 | R. | University Med. Coll., New York... | 1879 | 34 2-9 |
| 275 | R. | University of Michigan..... | 1902 | 59 5-9 |
| 287 | R. | Univ. of the South, Tennessee..... | 1901 | 65 1-9 |
| 271 | R. | Bellevue Hosp. M. Coll., New York. | 1887 | 22 2-9 |
| 273 | R. | Coll. of Phys. and Surgs., Baltimore | 1892 | 69 1-9 |
| 277 | R. | Faculty of Paris, France..... | 1891 | 67 5-9 |
| 280 | R. | Royal University of Pisa, Italy.... | 1899 | 66 1-9 |
| 283 | E. | Eclectic Med. Inst., Cincinnati.... | 1894 | 62 2-9 |

**Illinois January Report.**—Dr. J. A. Egan, secretary, Springfield, reports the examination held by the Illinois State Board of Health in Chicago, Jan. 15, 16 and 17, 1903, as follows: Number of subjects examined in, 11; total questions, 110; percentage required to pass, 75; written examination; total examined, 48; passed, 43; failed, 5.

PASSED.

| Candidate. | Sch. of Pract. | College. | Year Grad. | Per Cent. |
|---|---|---|---|---|
| 1567 | R. | College of Phys. and Surgs., Chicago.. | 1903 | 85 |
| 1569 | R. | College of Phys. and Surgs., Chicago.. | 1903 | 83 |
| 1575 | R. | College of Phys. and Surgs., Chicago.. | 1903 | 77 |
| 1580 | R. | College of Phys. and Surgs., Chicago.. | 1903 | 82 |
| 1581 | R. | College of Phys. and Surgs., Chicago.. | 1902 | 84 |
| 1583 | R. | College of Phys. and Surgs., Chicago.. | 1903 | 80 |
| 1586 | R. | College of Phys. and Surgs., Chicago.. | 1901 | 89 |
| 1587 | R. | College of Phys. and Surgs., Chicago.. | 1903 | 86 |
| 1590 | R. | College of Phys. and Surgs., Chicago.. | 1902 | 91 |
| 1593 | R. | College of Phys. and Surgs., Chicago.. | 1902 | 85 |
| 1602 | R. | College of Phys. and Surgs., Chicago.. | 1903 | 88 |
| 1608 | R. | College of Phys. and Surgs., Chicago.. | 1903 | 96 |
| 1609 | R. | College of Phys. and Surgs., Chicago.. | 1903 | 88 |
| 1610 | R. | College of Phys. and Surgs., Chicago.. | 1903 | 84 |
| 1597 | R. | College of Phys. and Surgs., Chicago.. | 1903 | 84 |
| 1598 | R. | College of Phys. and Surgs., Chicago.. | 1903 | 87 |
| 1612 | R. | College of Phys. and Surgs., Chicago.. | 1903 | 87 |
| 1578 | R. | College of Phys. and Surgs., Chicago.. | 1903 | 87 |
| 1568 | R. | Rush Medical College..... | 1902 | 89 |
| 1579 | R. | Rush Medical College..... | 1903 | 87 |
| 1582 | R. | Rush Medical College..... | 1903 | 88 |
| 1585 | R. | Rush Medical College..... | 1903 | 84 |
| 1588 | R. | Rush Medical College..... | 1902 | 89 |
| 1595 | R. | Rush Medical College..... | 1902 | 89 |
| 1600 | R. | Rush Medical College..... | 1903 | 85 |
| 1605 | R. | Rush Medical College..... | 1900 | 91 |
| 1570 | R. | N.-W. Univ. Woman's M. Coll., Chicago | 1901 | 86 |
| 1574 | R. | Northwestern University, Chicago..... | 1902 | 85 |
| 1577 | R. | Northwestern University, Chicago..... | 1902 | 91 |
| 1571 | H. | Hahnemann Medical College, Chicago.. | 1903 | 81 |
| 1573 | H. | Hahnemann Medical College, Chicago.. | 1901 | 85 |
| 1596 | H. | Hahnemann Medical College, Chicago.. | 1902 | 81 |
| 1572 | R. | Jefferson Medical College, Philadelphia. | 1902 | 87 |
| 1584 | R. | National Medical University, Chicago.. | 1902 | 82 |
| 1589 | R. | University of Michigan..... | 1899 | 87 |
| 1594 | R. | University of Athens, Greece..... | 1899 | 77 |
| 1599 | R. | University of Vienna, Austria..... | 1901 | 86 |
| 1603 | R. | University of Prague, Austria..... | 1896 | 87 |
| 1613 | R. | University of Leipzig, Germany..... | 1902 | 84 |
| 1601 | R. | Woman's Medical College, Baltimore... | 1896 | 83 |
| 1606 | R. | Laval University, Montreal..... | 1896 | 83 |
| 1607 | R. | Baltimore Medical College, Baltimore.. | 1889 | 82 |
| 1611 | R. | Harvey Medical College, Chicago..... | 1902 | 86 |

FAILED.

| | | | | |
|---|---|---|---|---|
| 1566 | R. | College of Phys. and Surgs., Chicago.. | 1902 | 63 |
| 1575 | R. | Barnes Medical College, St. Louis..... | 1902 | 69 |
| 1592 | R. | Barnes Medical College, St. Louis..... | 1901 | 53 |
| 1591 | R. | Keokuk Med., Coll. Phys. and Surgs... | 1902 | 73 |
| 1604 | R. | National Medical University, Chicago.. | 1902 | 67 |

**Utah Report.**—Dr. R. W. Fisher, secretary, reports as follows for the Utah State Board of Medical Examiners: Examination held at Salt Lake City, April 6 and 7, 1903; subjects, 10; questions, 80; percentage required, 75; written examination; examined, 13; passed, 12; failed, 1:

PASSED.

| Candidate. | Sch. of Pract. | College. | Year Grad. | Per Cent. |
|---|---|---|---|---|
| 1 | R. | Rush Medical College..... | 1902 | 87.4 |
| 6 | R. | Rush Medical College..... | 1903 | 85.9 |
| 7 | R. | Rush Medical College..... | 1903 | 86.7 |
| 8 | R. | Rush Medical College..... | 1903 | 88.7 |
| 9 | R. | Rush Medical College..... | 1903 | 88.1 |
| 2 | R. | College of Phys. and Surgs., Chicago | 1898 | 87.1 |
| 10 | R. | College Phys. and Surgs., N. Y. City. | 1884 | 82.3 |
| 3 | H. | Hahnemann Med. Coll. of the Pacific | 1902 | 82.3 |
| 4 | R. | Phys. and Surgs., Dublin, Ireland... | 1883 | 82.3 |
| 5 | R. | University of Virginia..... | 1895 | 85.9 |
| 11 | R. | Omaha Medical College..... | 1901 | 79.6 |
| 12 | R. | Gross Medical College, Denver..... | 1902 | 80.8 |

FAILED.

| | | | |
|---|---|---|---|
| 1 | R. | St. Louis College of Phys. and Surgs. .... | *47.7 |

* Third examination.

**Connecticut Report.**—Dr. C. A. Lindsley, secretary of the State Board of Health, reports that the examining committee of the Connecticut Medical Society, at three different sessions during the year 1902, at New Haven, gave written examinations in 10 subjects, with 100 questions, and required a percentage of 75. The total number examined was 76, of whom 66 passed and 10 failed. In the absence of the percentages usually given in these columns, we give below a summary:

| Sch. of No. | Pract. | College. | Found Qual. | Not Qual. |
|---|---|---|---|---|
| 1 | R. | Medical College of Alabama..... | .. | 1 |
| 16 | R. | Yale University ..... | 16 | . |
| 5 | R. | Baltimore Medical College..... | 3 | 2 |
| 2 | R. | Johns Hopkins ..... | 2 | . |
| 3 | R. | Tufts Medical College..... | 2 | 1 |
| 1 | R. | Harvard University ..... | 1 | . |
| 1 | R. | Dartmouth Medical College..... | 1 | . |
| 1 | R. | University of Minnesota..... | 1 | . |
| 1 | R. | University of New York..... | 1 | . |
| 1 | R. | University of Louisville..... | 1 | . |
| 3 | R. | University of Pennsylvania..... | 3 | . |
| 5 | R. | University of Vermont..... | 5 | . |
| 1 | R. | University of the South..... | .. | 1 |
| 6 | R. | Bellevue Hosp. Med. Coll., New York.. | 6 | . |
| 11 | R. | College of Phys. and Surgs., New York. | 11 | . |
| 1 | R. | College of Phys. and Surgs., Chicago.. | 1 | . |
| 1 | R. | College of Medicine, Syracuse..... | 1 | . |
| 1 | R. | Cornell University ..... | 1 | . |
| 2 | R. | Long Island College of Medicine..... | 1 | 1 |
| 2 | R. | Starling Medical College..... | .. | 2 |
| 3 | R. | Medico-Chirurgical, Pennsylvania .... | 2 | 1 |
| 2 | R. | Woman's Medical College, Pennsylvania | 2 | . |
| 3 | R. | Jefferson Medical College, Philadelphia | 3 | . |
| 1 | R. | Gross Medical College..... | 1 | . |
| 1 | R. | McGill University ..... | 1 | . |

He further reports that the committee of the Connecticut Homeopathic Medical Society likewise held three different sessions in the year 1902, at Hartford, with the same number of subjects and questions and percentage required, at which the number examined was 6; passed 5, and failed 1, as follows:

| Sch. of No. | Pract. | College. | Found Qual. | Not Qual. |
|---|---|---|---|---|
| 1 | R. | Trinity Medical College, Toronto..... | .. | 1 |
| 2 | H. | Boston University School of Medicine. | 1 | 1 |
| 1 | H. | New York Homeopathic College..... | 1 | . |
| 3 | H. | Hahnemann Med. Coll., Philadelphia.. | 3 | . |

The committee of the Connecticut Eclectic Medical Association made no examinations during the year.

## Medical Organization.

### Reorganization.

We quote the following from the *Medical Fortnightly:* "It is almost the rule that every community which is large enough to have a medical society, has two, such is the perversity of human nature and so difficult is it for us to agree among ourselves. The fact that there are more than enough local medical societies ready and willing to undertake the responsibility of being made the local gateway to the American Medical Association is one of the most troublesome problems in the way of reorganization. In St. Louis there was no question as to which society would be recognized, the St. Louis Medical Society was so easily the most important and the only society which could be seriously considered; other communities are less fortunate, and considerable feeling is being engendered in the endeavor to decide which of the aspirants shall be selected. That all will be happily settled eventually goes without saying, and there can be no question the results of the reorganization will demonstrate the wisdom of its having been undertaken. To hasten this happy time it is necessary that the members of the various county societies show a generous disposition during the present period; in undertaking to represent the American Medical Association locally a responsibility rests on each society to conform to the requirements of the Association. To let a matter of sex or petty personalities cause the rejection of physicians, who are eligible for membership in the National Association in all points except such local membership, should be sufficient to discredit any society with the state and National organizations. A broad and generous interpretation of the code and an elimination of all considerations which have no definite bearing on the ethical or moral standing of a physician in his community should characterize the attitude of all county societies toward those who desire membership with us; lacking this the days of troubles of reorganization will be long continued.

### Harrison County (Iowa) Medical Society.

Physicians of Harrison County, Iowa, met in Logan, May 21, and organized a county medical society, with the following officers: President, Dr. Irving C. Wood, Logan; vice-presidents, Drs. R. V. Witter, Woodbine, and Thomas Macfarlane, Mondamm; secretary, Dr. J. H. Gasson, Missouri Valley, and treasurer, Dr. Joseph Knowles, Logan.

**Thayer County (Neb.) Medical Society.**

Physicians of Thayer County met at Hebron, April 14, and organized a county medical society, with the following officers: Dr. Joseph V. Hinchman, Hebron, president; Dr. George A. Birdsall, Alexandria, vice-president; Dr. Joseph H. Boyes, Hebron, secretary and treasurer; Drs. Cyrus M. Easton, Hebron, Adam Herney, Deshler, and W. T. Reynolds, Hebron, censors, and Dr. Charles C. Snowden, Davenport, delegate to the state society.

**Livingston County (Ill.) Medical Society.**

At the annual meeting held in Pontiac, May 14, it was voted that the society affiliate with the Illinois State Medical Society. The following officers were elected: Dr. Thaddeus O. Bannister, Odell, president; Dr. John J. Stites, Pontiac, vice-president; Dr. John Ross, Pontiac, secretary-treasurer; Drs. James W. Mitchell, Pontiac, George T. Carson, Chatsworth, and Emmet E. McCoy, Flanagan, censors, and Dr. John Ross, Pontiac, delegate to the state society.

**Bremer County (Iowa) Medical Society.**

This society, organized in October last at Tripoli, Iowa, with Dr. Herman C. Jungblut, Tripoli, president, and Dr. Bert C. Dunkelberg, Tripoli, secretary-treasurer, held its third meeting at Waverly, May 27, and adopted the constitution and by-laws proposed by the American Medical Association for county societies. After the meeting a banquet was given in honor of Dr. Oscar Burbank, Waverly, who celebrated his eighty-third birthday the day previous, and who has been in active practice for 55 years.

**Wisconsin in Line.**

At the meeting of the Wisconsin State Medical Society, held in Milwaukee, June 3 to 5, the constitution and by-laws recommended by the American Medical Association was adopted unanimously, a committee of ten was appointed to act as a council for the coming year and till the state is divided into regular councilor districts and councilors elected. Several county societies have been organized in Wisconsin during the past few months, and the work of organization will now be taken up systematically.

**Columbiana County (Ohio) Medical Society.**

This society was organized at East Liverpool, May 19, and adopted the constitution and by-laws proposed by the American Medical Association for county societies. The following officers were elected: Dr. William N. Bailey, East Liverpool, president; Dr. Arthur B. Holland, Wellsville, vice-president; Dr. William E. Morris, Lisbon, secretary-treasurer; Dr. Wilbert A. Hobbs, East Liverpool, delegate to the state society, and Dr. James T. Elliott, East Liverpool, alternate, and Drs. William S. McFarland, Wellsville, Arthur C. Yengling, Salem, and William M. Calhoun, East Liverpool, censors.

## Societies.

### COMING MEETINGS.

Minnesota State Medical Society, St. Paul, June 17.
Medical Association of Montana, Helena, June 17-18.
Medical Society of New Jersey, Asbury Park, June 23-25.

**American Medico-Psychological Association.**—At the annual meeting in Washington, D. C., May 13, Dr. Alonzo B. Richardson, Washington, was elected president.

**American Association of Pathologists and Bacteriologists.**—At the meeting in Washington, D. C., May 13, Dr. Eugene Hodenpyl, New York City, was elected president.

**Kennebec County (Maine) Medical Association.**—At the annual meeting held in Augusta, May 20, Dr. Luther G. Bunker, Waterville, was elected president, and Dr. Wellington Johnson, Augusta, secretary-treasurer.

**Thurston County (Wash.) Medical Society.**—At the annual meeting, May 25, in Olympia, Dr. George W. Ingham was elected president; Dr. John W. Mowell, secretary, and Dr. W. L. Bridgford, treasurer, all of Olympia.

**Utah County (Utah) Medical Society.**—At the annual meeting held May 6, Dr. J. Franklin Noyes, American Fork, was elected president; Dr. J. M. Henry, Payson, vice-president; and Dr. David Westwood, Provo, secretary and treasurer.

**Arizona Medical Association.**—At the annual meeting held in Phoenix, May 27 and 28, Dr. Logan D. Dameron, Phoenix, was elected president, and Dr. John W. Ross, Phoenix, secretary. Tucson was selected as the place of meeting for 1904.

**American Neurological Association.**—At the annual meeting held in Washington, May 13, Dr. Frank R. Fry, St. Louis, was elected president; Dr. Hugh T. Patrick, Chicago, first vice-president, and Dr. Graeme M. Hammond, New York, secretary and treasurer.

**American Laryngological Association.**—At the annual meeting in Washington, May 13, Dr. Jacob H. Hartman was elected president, and Dr. James E. Newcomb, New York City, secretary and treasurer. Atlantic City was decided on as the next meeting place.

**Tolland County (Conn.) Medical Association.**—At the one hundred and eleventh annual meeting held in Hartford, April 23, Dr. Edwin T. Davis, Ellington, was elected president; Dr. William C. Haven, Coventry, vice-president; and Dr. Ernest O. Winship, Rockville, clerk and treasurer.

**Southern Medical College Association.**—At the annual meeting held in New Orleans, May 5, Dr. Christopher Tompkins, Richmond, Va., was elected president; Dr. George C. Savage, Nashville, Tenn., secretary-treasurer, and Birmingham, Ala., was selected for the meeting-place in 1904.

**College of Physicians and Surgeons (Chicago) Alumni Association.**—At the annual meeting held in Chicago, May 25, Dr. Charles C. O. Byrne, Chicago, was elected president; Dr. C. A. Stevens, Texarkana, Texas, vice-president, and Dr. James Moreau Brown, Chicago, secretary-treasurer.

**American Dermatological Association.**—At the meeting in Washington, May 13, Dr. Joseph Zeisler, Chicago, was elected president; Dr. Milton B. Hartzell, Philadelphia, vice-president, and Dr. Charles J. White, Boston, secretary and treasurer. The next meeting will be held in Niagara Falls, N. Y.

**Galva District (Ill.) Medical Society.**—At the annual meeting held in Galva, May 7, Kewanee was selected as the place for the 1904 meeting. Dr. Harry W. Waterous, Galva, was elected president; Dr. Francis O. Lowe, Kewanee, vice-president, and Dr. H. Nelson Heflin, Kewanee, secretary-treasurer.

**American Association of Genito-Urinary Surgeons.**—At the annual meeting held in Washington, D. C., May 12 and 13, Dr. Edwin C. Burnett, St. Louis, was elected president; Dr. F. Tilden Brown, New York City, vice-president, and Dr. John Vanderpoel, New York City, secretary and treasurer.

**Physicians' Club of Chicago.**—The annual meeting was held June 1, at which the following officers were elected: Secretary, Dr. Henry F. Lewis; directors (for two years), Drs. Joseph Zeisler, A. M. Corwin, and Charles P. Small; (holdover), Drs. A. C. Cotton, J. Clarence Webster and John M. Dodson.

**Hardeman County (Tenn.) Medical Society.**—Dr. M. M. Smith, Cedar Chapel, was elected president; Dr. H. M. Milstead, Crainsville, vice-president, and Dr. Robert W. Tate, Bolivar, secretary-treasurer, at the annual meeting held in Bolivar. Whiteville was selected as the next place of meeting, October 13.

**Oklahoma Medical Society.**—The eleventh annual meeting was held in Guthrie, May 12. Dr. Abraham L. Blesh, Guthrie, was elected president; Dr. Aarcha K. West, Oklahoma City, vice-president; and Dr. Eugene O. Barker, Guthrie, secretary and treasurer. The next meeting will be held in Oklahoma City, November 11.

**American Ophthalmological Association.**—At the annual meeting in Washington, May 14, Dr. Charles S. Bull, New York, was elected president; Dr. Arthur Matthewson, Brooklyn, vice-president; Dr. Jonathan S. Prout, Brooklyn, corresponding secretary, and Dr. Samuel B. St. John, Hartford, Conn., recording secretary and treasurer.

**American Medical Editors' Association.**—At the annual meeting held in New Orleans, May 5, the following officers were elected: Dr. Charles E. De M. Sajous, Philadelphia, president; Drs. Charles Chassaignac, New Orleans, and Otho F. Ball, St. Louis, vice-presidents, and Dr. J. McDonald, Jr., New York City, secretary-treasurer.

**Ohio State Pediatric Society.**—This society, at its annual meeting held in Dayton, June 2, elected the following officers: President, Dr. Edwin W. Mitchell, Cincinnati; vice-presidents, Drs. Daniel G. Reilly, Dayton, and William W. Pennell, Fredericktown, and secretary-treasurer, Dr. William Clark, Cleve-

land. During this meeting almost fifty new members were enrolled.

**American Orthopedic Association.**—At the seventeenth annual meeting held in Washington, May 12, 13 and 14, the following officers were elected: Dr. Reginald H. Sayre, New York City, president; Drs. Joel E. Goldthwaite, Boston, and Gwilym G. Davis, Philadelphia, vice-presidents; Dr. John Ridlon, Chicago, secretary, and Dr. Elliott G. Brackett, Boston, treasurer.

**Association of American Physicians.**—At the annual meeting in Washington, D. C., May 14, Dr. William T. Councilman, Boston, was elected president; Dr. Edward D. Trudeau, Saranac Lake, N. Y., vice-president; Dr. Solomon Solis-Cohen, Philadelphia, recorder; Dr. Henry Hun, Albany, N. Y., secretary, and Dr. J. P. Crozer Griffith, Philadelphia, treasurer. The next meeting will be held in Washington.

**Decatur (Ill.) Medical Society for Macon County.**—At the annual meeting held May 26, the following officers were elected: President, Dr. Silas E. McClelland, Decatur; vice-president, Dr. Charles M. Wood, Maroa, and secretary-treasurer, Dr. Lynn M. Barnes, Decatur. The society adopted a new constitution and by-laws which followed very closely those recommended by the American Medical Association.

**American Climatological Association.**—At the twentieth annual meeting held in Washington, D. C., May 12, 13 and 14, the following officers were elected: Dr. James C. Wilson, Philadelphia, president; Drs. Thomas Darlington, Jr., New York City, and Thomas D. Coleman, Augusta, Ga., vice-presidents, and Dr. Guy Hinsdale, Philadelphia, secretary. The next meeting will be held in Philadelphia, June 2 to 4, 1904.

**American Pediatric Society.**—At the fifteenth annual meeting held in Washington, D. C., May 12, 13 and 14, the following officers were elected: President, Dr. Augustus Caille, New York City; vice-presidents, Drs. Allen M. Barnes, Toronto, Ont., and Edwin E. Graham, Philadelphia; secretary, Dr. Samuel S. Adams, Washington, D. C.; treasurer, Dr. J. Park West, Bellaire, Ohio, and recorder and editor, Dr. Walter L. Carr, New York City.

**Maryland Public Health Association.**—At the meeting in Annapolis, June 4 and 5, the subjects discussed were vaccination, disinfectants, consumption, typhoid and malarial fevers, water supply of Baltimore and Annapolis, and health as a state investment. The following were elected officers: President, Dr. Thomas B. Owings, Ellicott City; vice-president, Dr. Frank H. Thompson, Annapolis; secretary, Dr. John S. Fulton, Baltimore, and treasurer, Dr. W. Royal Stokes, Baltimore.

**City and County Medical Society (Portland and Multnomah County, Oregon.)**—At the annual meeting in Portland, May 22, the following officers were elected: President, Dr. Robert L. Gillespie; vice-president, Dr. R. C. Coffey; treasurer, Dr. Albert E. Mackay; secretary, Dr. Alexander D. Mackenzie; councilors, Drs. James F. Bell, James K. Locke and Joseph A. Pettit; delegates to state society, Drs. Andrew C. Smith, Edward P. Geary, William Jones, and Simeon E. Josephi, all of Portland.

**Utah State Medical Society.**—The ninth annual meeting was held in Salt Lake City, May 12 to 14. Ogden was selected as the meeting place for 1904, and the following officers were elected: Dr. George W. Baker, Ogden, president; Drs. Frederick Clift, Heber City, and Emerson F. Root, Salt Lake City, vice-presidents; Dr. Walter S. Ellerbeck, Salt Lake City, secretary; Dr. James N. Harrison, Salt Lake City, treasurer, and Dr. Samuel C. Baldwin, Salt Lake City, delegate to the American Medical Association.

**American Medical Temperance Association.**—At the annual meeting held in New Orleans, May 8, the following officers were re-elected: Dr. Nathan Smith Davis, Chicago, honorary president; Dr. Winfield S. Hall, Chicago, president; Drs. Henry D. Didama, Syracuse, N. Y., T. A. McNicholl, New York City, and Henry O. Marcy, Boston, vice-presidents; Dr. Thomas D. Crothers, Hartford, Conn., secretary; Dr. Charles E. Stewart, Battle Creek, Mich., corresponding secretary, and Dr. George W. Webster, Chicago, treasurer.

**American Gastro-Enterological Association.**—At the sixth annual meeting held in Washington, May 14, Prof. C. A. Ewald of Berlin was the guest of honor, and a banquet was given him by the association. The following officers were elected: Dr. Samuel J. Meltzer, New York, president; Drs. Fenton B. Turck, Chicago, and William G. Morgan, Washington, D. C., vice-presidents; Dr. Charles D. Aaron, Detroit, secretary-treasurer, and Drs. A. L. Benedict, Buffalo, Max Einhorn, New York City, and Edward Quintard, New York City, councilors.

**Medical Society of the State of California.**—The thirty-third annual meeting was held in Santa Barbara, April 21 to 23. The legislative body has taken up the constitution and by-laws suggested by the American Medical Association for state societies; has made slight changes necessary to adopt it to local condition, and will present it to the society for action at the next meeting. The following officers were elected: President, Dr. H. Bert Ellis, Los Angeles; vice-presidents, Drs. William H. Flint, Santa Barbara and George A. Hare, Fresno; secretary (permanent) Dr. George H. Evans, San Francisco; assistant secretary, H. P. Hill, San Francisco; board of examiners, Drs. Dudley Tait, San Francisco, Lewis S. Thorpe, Los Angeles, Daniel E. Osborne, St. Helena, Walter S. Thorne, San Francisco, and Samuel H. Buteau, Oakland; alternates on board of examiners, Drs. Clark J. Burnham, San Francisco, Albert W. Kirk, San Francisco, and Francis M. Pottenger, Los Angeles; board of trustees, Drs. Curtis G. Kenyon, Philip M. Jones, Andrew W. Morton and Julius Rosenstirn, San Francisco, George A. Hare, Fresno, Thomas Ross, Sacramento, J. Gordon Baird, Riverside, Charles W. Nutting, Etna Mills, Frank L. Adams, Oakland, and Fitch C. E. Mattison, Pasadena. The society will meet in Paso Robles, April 19 to 21, 1904.

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## AMERICAN SURGICAL ASSOCIATION.

*Meeting held in Washington, May 12 to 14, 1903.*

The President, Dr. Maurice H. Richardson, in the Chair.

(*Continued from page 1595.*)

### Mikulicz on Gastrointestinal Surgery.

PROF. JOHN VON MIKULICZ-RADECKI, Breslau, Germany, read a paper on the second day entitled "Some Contributions to the Surgery of the Gastrointestinal Tract," in which he divided the subject into the following topics: 1. Cardiospasm and its treatment. 2. Peptic ulcer of the jejunum. 3. The operative treatment of severe forms of invagination of the intestine. 4. Operation on malignant growths of the large intestine.

He discussed each one at some length. In reference to the first topic, in view of the insufficiency of all therapeutic measures for relief, he advised the following operation:

The stomach is exposed by laparotomy and in the anterior wall is made an incision long enough to allow the entire left hand to pass into the stomach. Under the guidance of the fingers, which are pushed forward toward the cardiac end, an instrument resembling a glove stretcher is introduced into the cardiac orifice. Dilatation is gradually effected to such an extent that the blades of the instrument are about 7 cm. apart. Thus is caused a blunt dilatation of the cardia similar to the dilatation of the sphincter ani in case of anal fissure. Then the wounds in the stomach and in the parietal walls are closed.

As to peptic ulcer of the jejunum, the Professor stated that we are pretty certain about its etiology; it can be explained only by the prolonged presence of gastric juice which reaches the jejunum without having been normally diluted and neutralized by bile and by the pancreatic secretions. He does not believe that surgeons are any longer entitled to perform anterior gastroenterostomy, at least for benign affections of the stomach, but considers that the most rational method is the pyloroplastic operation.

MR. B. G. A. MOYNIHAN, Leeds, England, read a paper on "The Surgery of the Simple Diseases of the Stomach," in which he stated that the great majority of such cases susceptible to successful treatment by surgical measures are due to ulceration or to its complications and results.

### Papers on the Therapeutic Value of the X-Rays in Surgery.

DR. ARTHUR DEAN BEVAN, Chicago, read a paper entitled "The Therapeutic Value of the *X*-Ray."

DRS. WM. L. RODMAN and G. E. PFAHLER read a paper entitled "The Value of the *X*-Ray in Superficial Epitheliomata and Tuberculosis," with the following conclusions:

1. The length of time required for the cure of epitheliomata is longer than by surgical or caustic treatment, while the cosmetic results are better. The dangers are proportionate to the urgency of the treatment as indicated by the degree of malignancy. It should only be recommended in cases that are inoperable either because of the extent of the growth or its location.

2. It is probably the best means at our command for the treatment of superficial tuberculosis and gives better cosmetic results.

3. It should follow all operations for malignant disease or tuberculosis with the two-fold object of stimulating the healing process and of preventing a recurrence. In some cases it may be of advantage to give a short course of treatment before operation to destroy the outlying portions of the growth and make such operation of a less formidable nature.

DR. WILLIAM B. COLEY, New York, read a paper entitled "Further Observations on the Influence of the Roentgen Ray on Sarcoma," in which he described 36 cases. He felt that, in regard to the relative merits of the toxins and *x*-rays in inoperable sarcoma, the time had been too short and experience too limited thus far to definitely decide this question. He did not believe that the *x*-ray method should be employed in operable cases of sarcoma, with the possible exception of carcinoma of the extremities, in which operation would necessitate amputation. In such cases he recommended a brief course of the combined *x*-ray and toxin treatment.

DR. ALEX. B. JOHNSON, New York, read a paper entitled "Some Experiences in the Treatment of Inoperable Malignant Growths by the *X*-Ray," in which he reported ten cases, nine of carcinoma and one of sarcoma; eight died under treatment and two are still alive and have apparently improved, one of them being the case of sarcoma. He described the technic.

### Hernia.

DR. WILLIAM B. COLEY, New York, read a paper entitled "Results of 1,000 Operations for the Radical Cure of Inguinal and Femoral Hernia Performed Between 1891 and 1902." Out of the 1,003 cases which the author had operated on between August, 1891, and December, 1902, there were 937 cases of inguinal hernia, 756 of which occurred in males and 181 in females; and 66 cases of femoral hernia, all males. In the 66 cases of femoral hernia there was no mortality and the primary union was obtained in all but one case, which formed the only recurrence, the balance having remained well from six months to eleven years. The Bassini method for femoral hernia was employed in 16 cases, and the purse-string suture (with kangaroo tendon) in 50 cases. Out of the 181 operations on the female for inguinal hernia there was no recurrence and no relapse, the method employed being practically Bassini's method for the male. There was no mortality in the 1,003 cases. In children operation should seldom be advised under 4 years, the reasons being that many of the cases at this age are cured by a truss, but after that age in which a truss has been tried and failed, or cases in which the presence of reducible hydrocele prevents a truss from holding the rupture, operation is advised. In all adult cases under the age of 50 years operation is advised unless there are strong contraindications. Between the ages of 50 and 70 years operation is advised in patients in good health in cases in which the rupture is held with difficulty by a truss. Six hundred and fifty of these cases were found well from 1 to 11 years; 708 cases were found well from 6 months to 11 years, and 467 from 2 years to 11 years. A careful résumé of the literature on the subject and a comparison of the results obtained by other operators was given.

DR. N. P. DANDRIDGE, Cincinnati, reported a case of gangrene of 15 inches of cecum and ileum after an operation for appendicitis, with relief of artificial anus after repeated operations.

### Operations in Presence of Albumin, Etc.

DR. JOHN C. MUNRO, Boston, read a paper on the third day entitled "The Significance of Albumin and Casts in Surgical Patients," in which he stated that while he believed that there was no doubt that there was danger in operating on a patient whose kidneys are incapable of sufficient elimination, and where there are secondary organic changes, because a patient exhibits a small amount of albumin, hyaline and fine granular casts, with renal cells, the conclusion should not be hastily reached that he is not a fit subject for operation; on the other hand, the presence of any of these symptoms should be sufficient to cause a thorough investigation. He reported a series of 500 cases showing albumin and casts in the urine, not including those, however, that showed renal degeneration, glycosuria, genitourinary diseases, burns, erysipelas or similar diseases, most of whom were subjected to ether anesthesia, and in none of them was it noticed that any renal damage was inflicted. Out of the series of 500 cases 63 died, 8 from shock, 2 after operation for general peritonitis, 5 from pneumonia, 3 from tuberculosis, 19 from sepsis or severe peritonitis, 4 from senility, and, in addition, there were deaths from embolism, malignant disease, cardiac disease, skull fractures and pancreatitis, where the rôle of the urinary organs must have been insignificant. Of the 4 cases in which death was ascribed to senility, one with cellulitis of the arm had 0.25 per cent. of albumin and casts, one with intestinal cancer had profuse diarrhea, one had a strangulated hernia and the fourth died one month after fracture of the femur, showing only the slightest possible trace of albumin with hyaline and granular casts.

### Digital Compression to Cure Aneurism.

DR. FRANCIS J. SHEPHERD, Montreal, Canada, read a paper entitled "The Treatment of Aneurism of the External Iliac Artery by Digital Compression, with Report of a Case," in which he referred to the great dangers of surgical interference with the tumor, making amputation of the extremity preferable in many cases to trying to remove the aneurism. He gave a careful résumé of the literature on the subject. The advantages of digital compression are that no apparatus is necessary, the finger being the sole means by which the artery is controlled above the aneurism. This, of course, requires a number of assistants, and does not usually require to be kept up more than 24 hours; in the case reported the pulsation ceasing at the end of 12 hours. This case occurred in a man 43 years of age, who had strained himself by lifting a heavy weight, and some months afterward a swelling appeared in the left groin, which pulsated; was at first soft and painless, but gradually became harder and seemed to grow upward into the abdomen. The patient objected to operation, and it was decided to put him on palliative treatment until the session opened, so that relays of students could be secured. He was put on Tuffnell's treatment, and icebags applied over the tumor, iodid of potassium being given internally and very little fluid. At the end of 12 hours pulsation had entirely ceased, the pain having been severe after the first four or five hours until the end of twelve hours, being controlled by hypodermic injections of morphin. After 12 hours the patient had no excessive pain, but compression was continued in a moderate degree for 12 hours more, when the leg was wrapped in cotton wool and carefully bandaged, he being kept in bed for a couple of weeks more, and six months after the operation, although the tumor could be easily felt, there was no pulsation, and it was very hard.

### Strangulated Hernia.

DR. LEONARD FREEMAN, Denver, read a paper entitled "Strangulated Left Duodenal Hernia, in which the Sac Contained the Entire Small Intestine, the Cecum and a Portion of the Colon," in which he referred to the fact that the abdominal viscera and peritoneum are subject to various malformations and malpositions, sometimes acquired and often congenital, and unless the surgeon be familiar with these unusual phenomena his diagnostic ability will be curtailed, by confusing conditions for which he can find no adequate explanation. The peritoneal fossæ may be responsible for the most remarkable forms of hernia and this is especially true of the duodenal fossæ. He carefully reviewed the anatomic formation in this region and reported the case described in the title.

### Operations for Goiter.

DR. B. FARQUHAR CURTIS, New York, read a paper entitled "Thyroidectomy and Sympathectomy for Exophthalmic Goiter," in which he referred to the fact that the surgical treatment of this condition has excited much interest of late owing to the fact that medical treatment failed in many cases, although he believed, if the disease had not progressed too far and the patient's circumstances were such as to permit systematic treatment for a sufficient length of time, rest, hygienic measures, and proper medication will generally produce a cure,

or at least hold the symptoms in check, but there are many cases amenable to surgical treatment that can not be cured by medicine. However, this treatment is not unattended by dangers, especially acute exacerbations of the symptoms known as thyroidism, which is just as liable, however, to be produced by operation in any other part of the body.

In conclusion, he stated that exophthalmic goiter could be cured by both thyroidectomy and sympathectomy, a perfect result being secured in about 60 per cent. of the cases of thyroidectomy, and an immediately good result appears to be the rule in sympathectomy. Sufficient time has not elapsed to judge of the permanence of the cure, but the immediate results are far superior to those of thyroidectomy. The relative mortality of the two would seem to favor sympathectomy (Kocher 4 deaths in 59 cases of thyroidectomy and ligation only; Jonnesco no deaths in 14 cases of bilateral sympathectomy), although in his own cases the result is the opposite. He believed that local anesthesia should be employed, and sympathectomy should be performed only on one side at a time, a sufficient time being allowed to elapse for the patient to recover from the effects of the first operation.

### Operations on the Prostate.

DR. WILLY MEYER, New York, read a paper entitled "Prostatectomy and Galvano-Caustic Prostatotomy (Bottini's Operation); Their Present Status in the Radical Treatment of the Hypertrophied Prostate Gland," which he summed up as follows:

1. The operations making a direct attack on the enlarged prostate gland are preferable to those aiming to exert an indirect influence.

2. We have two useful operative procedures for the direct treatment of the enlarged prostate, i. e., prostatectomy and galvanocaustic prostatotomy (Bottini's operation).

3. In selecting the method indicated in the given case, we must individualize and be guided by anatomic, pathologic and social conditions.

4. Prostatectomy is, of course, the most radical and most surgical procedure; it should be the operation of choice whenever promising success.

5. Perineal prostatectomy offers advantages over the suprapubic method, since it enables the operator to do the operation under the direct guidance of his eyes.

6. Debilitated patients who seem unfit subjects for the more radical operation should not be relegated to catheter life, nor should prostatectomy be performed in order "to let them down easy"; they should be advised to have Bottini's operation done.

7. Surgeons should familiarize themselves with both methods in order to be in a position to do justice to their patients.

8. It is the duty of those refusing to do Bottini's operation under any circumstances to nevertheless advise patients who ask for more radical relief, to have Bottini's operation done, if the operation with the knife seems contraindicated.

9. Further, carefully compiled statistics as to the late results of both operative procedures, preferably in the hands of one man, are desirable in that they will increase our knowledge with reference to the proper selection of the proper method in the individual case.

### Diffuse Gonococcus Infection of the Entire Upper Extremity.

DR. CHARLES A. POWERS, Denver, reported a case of this. His patient was a man of 28 years who developed a very extensive phlegmon in the neighborhood of the right elbow joint with concomitant swelling and edema of the entire limb from the pectoral region and shoulder to the ends of the fingers. The gonococcus was recovered from pus liberated by early free incisions, and was also found in a thin serous fluid which escaped at the site of other openings. The course was protracted over many weeks, the patient recovering with stiffened joints. The author emphasized the fact that systemic gonorrheal infection may invade the tissues in wide variety, the gonococcus having been found in the peritoneum, the pleura, the pericardium, myocardium, endocardium, meninges of the brain and spinal cord, periosteum, perichondrium, muscles and tendon sheaths, bursæ, fascia, the skin, the parotid gland, the kidney and the blood current, as well as the joints.

### Myositis Ossificans Traumatica.

DR. J. F. BINNIE, Kansas City, Mo., read this paper, calling attention to the fact that bone may be formed in muscle or tendons under several distinct conditions; there may be a process of ossification attacking one muscle after another, myositis ossificans progressica, producing the ossified man of the freak shows. Often repeated slight traumata give rise to bone growths in muscle or tendon, examples of such growths being "riders' bone," "drill bone," "cavalryman's bone," and "fencers' bone," and lastly there is the so-called myositis ossificans traumatica, where a mass of bone forms in a muscle after a single injury. The author reported a case of the latter in a man aged 41 who had received a severe blow on the right forearm two weeks previously while boxing. One week later the tumor was removed, and eight months thereafter there had been no recurrence and no disability. The paper dealt fully with the literature on the subject and the various theories of the origin.

### Method of Instruction in Surgical Pathology.

DR. J. C. BLOODGOOD, Baltimore, said that clinical instruction in hospital wards and out-patient departments always has certain defects and limitations as a complete method of instruction. He felt that during the time the student spends in the wards many important surgical diseases had not been seen at all, or so rarely that the student did not get a clear conception of the disease, and in addition it is very difficult for the student to follow the patient throughout the progress of the disease and his after condition. In the Johns Hopkins Hospital the instruction of the third-year medical class in the surgical laboratory is divided into two parts: First, the systematic part, in which the instruction is given by pamphlets, museum specimens, microscopic sections and illustrations. Second, the more difficult or routine instruction, which is limited to the fresh material sent to the laboratory from the operating and autopsy rooms. He then described each of these parts in detail.

### Officers Elected.

The following officers were elected: President, Dr. N. P. Dandridge, Cincinnati; secretary, Dr. Dudley P. Allen, Cleveland; treasurer, Dr. George R. Fowler, Brooklyn; recorder, Dr. Richard H. Harte, Philadelphia. The next meeting will be held in St. Louis some time in May, 1904.

*(To be continued.)*

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## DENVER CITY AND COUNTY MEDICAL SOCIETY.

*Regular Meeting, held May 5, 1903.*

Dr. S. D. Hopkins in the Chair.

### The Prognosis of Diseases Incidental to Military Service in the Philippines.

DR. G. H. RICHARDSON, U. S. A., said that of the 166 cases of insanity reported in the Army in 1901, 120 cases occurred in the Philippine Islands, or 2 of every 1,000 on duty there. In 1900 the numbers sent from the Philippine Islands to the United States was over 200. During part of 1900 and 1901 he was in charge of the detention ward in San Francisco where these cases were sent for diagnosis and observation. It was found that 25 per cent. of all cases were, on their arrival here, in such a mental condition as to permit them to be returned to duty. The sea voyage home and the fact that they were once more on their native soil seemed to cure them. Those who were sent to the Government Insane Asylum in Washington, he is informed, did not remain there for any length of time, with the exception of those in whom a diseased mental condition existed prior to enlistment. The form of insanity was a mild melancholia with suicidal tendencies. The history of nostalgia was always marked. Secondary effects of heat exhaustion produce various neurotic conditions. They are vague and indefinite. Severe headache, general weakness, dyspeptic symptoms, loss of memory, epileptiform seizures, local palsies, choreiform attacks, failure of vision and other affections of the special senses. In 1901 21 were discharged for cephalgia alone. It is impossible to determine how far these sequelæ are attributable to sun exposure or how far they may depend on some intercurrent disease. He does not think the

condition is altogether due to simple sun heat. There must be some special element in the solar spectrum. This class of cases should be sent back at once to the states or some cool climate. In not a few instances, with the most careful treatment, medicinal and climatic, serious permanent diseases of the brain remain, giving rise sometimes to distressing intellectual enfeeblement. Their symptoms are entirely subjective and, like the "railroad spine" to the surgeon and claim agent, by their irregularity and indefiniteness, they give no end of trouble and worry to pension boards.

The gastrointestinal trouble forms the majority of cases sent for treatment. Dysentery stands at the head of the list. The amebic form is the more chronic, but more amenable to treatment, especially the local rise of high injections of quinin. The tendency to relapse, however, is constantly hanging over one who has had it once, and what is worse, is liable to develop abscess of the liver. The bacillary form never causes abscess of the liver, the acute symptoms, however, are apt to be more severe and death is likely to occur early in the disease.

Sprue is frequently met with in the tropics. It may remain latent there and develop for the first time in a temperate climate. It is characterized by alternating periods of exacerbation and quiescence, inflamed eroded tongue, flatulent dyspepsia, pale, copious, loose, frothy fermenting stools, marked emaciation and a tendency to relapse. It is slow in its progress, and unless cured tends to terminate in atrophy of the intestinal mucosa, and sooner or later prove fatal. The prognosis depends on the length of time the disease has existed, the age of the patient being bad for cases over 50, and careless, indifferent patients who do not realize the dangers in which they are, and for those cases who can not or will not restrict themselves to a pure milk diet for a considerable length of time. Cases of chronic diarrhea should be examined for the malarial parasite. Sixteen cases diagnosed as pulmonary tuberculosis showed the presence of malarial parasites. Treatment by quinin for a few days proved the infection to be of malarial origin.

### Report of a Case of Cerebral Lues.

DR. J. E. COURTNEY reported the following case: T. B., white, aged 24, cook. One year before he came under observation he was thrown from a buggy and struck on the left temple; was dazed for ten minutes. He denied any knowledge of ever having contracted syphilis, but recalled he had, some five years ago, a small sore on the glans penis, but it disappeared quickly. A year later he had some soreness and swelling in the inguinal region, but no suppuration, no eruption. He was in good health afterwards and served with the Rough Riders in Cuba. He experienced gradual failure of vision in the left eye for nearly a year, which has now been blind for several months, but with little pain until within the last three days. Left eye tender, tension increased, slight ptosis, ball congested, partial detachment of retina. Antedating the blindness of the left eye he noticed he could see objects to the left of the left eye, but not to the right—unilateral temporal hemianopsia. About six weeks ago he noticed jerking of the face and twitching of the muscles of the left arm, and then he lost consciousness. The day preceding this attack he was very sleepy, and for two days after he slept almost continuously day and night. No failure of articulation, but speech slow, gait lacking in elasticity, no decided reflex or vasomotor disturbances. He was then in the county hospital for five weeks. He had a second fit and in delirium jumped out of a second-story window on one occasion, and on another escaped and ran a block or two from the hospital under the idea that he was being killed. Inunctions of mercury and large doses of iodid of potassium were administered and he improved rapidly and weighs now forty pounds more than when he was ill. The interesting question which this case presents is, whether so slight a trauma started into activity the latent infection, and whether an original antisyphilitic course of treatment would have frustrated such late effects.

### A New Sterilizer.

DR. GEORGE MOLEEN exhibited a sterilizer which has the advantages over others in the market by being compact, portable and consisting only of three pieces, which includes receptacle for water, a compartment for instruments and dressings, etc. It is especially serviceable in obstetrical practice.

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## WEST VIRGINIA STATE MEDICAL ASSOCIATION.

*Thirty-sixth Annual Meeting, held in Charleston, W. Va., May 26-28, 1903.*

The President, Dr. H. B. Stout, Parkersburg, in the Chair.

The president's annual address contained many suggestions of great importance to the moral and material welfare of the association.

### Organized Mutual Defense.

The secretary's report showed the association to be in a prosperous condition and that the great strides it has made during the past year were made possible by its partial reorganization at the last meeting. The report closed with the recommendation that the association undertake to protect its members in suits of malpractice.

The association acted on this recommendation and adopted the following resolution:

*Resolved.*—That this Association pledges its moral support and will substantially defend any member who shall be sued; and further pledges the services of any and all its members, when called on, to attend any trial and testify in behalf of the member sued.

### Reorganization.

The meeting was an especially pleasant and profitable one. A partial reorganization had been effected in 1902, but, under the impression that the profession was not ready for the adoption of the entire Association plan, no provision was made for a House of Delegates, and this made many other changes in the constitution and by-laws necessary. As in other states where similar action was taken, some confusion and dissatisfaction had resulted, although everybody was greatly encouraged by the fact that, in spite of these difficulties, the membership had been almost trebled during the year, and that an increased interest in every phase of professional work was manifest on every hand. After a careful consideration and discussion of the situation, it was finally decided to set aside the action of last year and adopt the American Medical Association plan in full. This was done by unanimous consent and with much enthusiasm.

Too much credit can not be given to the officers of the association, including councilors, for the ease with which this complete plan of organization was adopted, although they had able assistance from Drs. Jepson, Wilson, Sharp and many other leading members. This makes the third state to set aside the partial reorganization of last year and accept the uniform plan proposed by the Association.

### Officers Elected.

The following officers were elected: President, Dr. T. L. Barber, Charleston; vice-presidents, Drs. Thomas M. Hood, Clarksburg; E. T. W. Hall, Freemansburg; Rolla Camden, Parkersburg; secretary, Dr. Wm. W. Golden, Elkins; treasurer, Dr. V. T. Churchman, Charleston; councilors, first district, Drs. C. A. Wingerter, Wheeling, and J. W. McDonald, Fairmont; second district, Dr. C. S. Hoffman, Keyser, and W. H. Proudfoot, Rowelsburg; third district, Dr. W. W. Tompkins, Charleston, and O. O. Cooper, Hinton; fourth district, Drs. W. S. Keever, and H. B. Stout, Parkersburg; fifth district, Drs. C. R. Enslow and T. W. Moore, Huntington; delegates to the American Medical Association, Drs. S. L. Jepson, Wheeling, and W. H. Sharp, Parkersburg. Fairmont was chosen as the next place of meeting.

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## MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

*One Hundred and Fifth Annual Meeting, held at Baltimore, April 28 to 30.*

### Colored Photography.

PROF. R. W. WOOD of Johns Hopkins University opened the session by request, with a lecture on colored photography and photography of objects usually invisible, as waves of sound, bullets in motion, etc.

### The Last Fifty Years.

DR. WILLIAM TRAVIS HOWARD, the president, delivered his address, which consisted of a review largely of his personal experience, to show that the past fifty years do not contain all or even the chief advances that have been made in medicine. He gave a sketch of Dr. John P. Mettauer of Farmville, Va., son of a French surgeon of the Revolution, under whom he studied and who was a most original and skilful surgeon, far ahead of his day. He was particularly successful in the treatment of hernia, vesico-vaginal fistula, stricture, etc. He eulogized the faculty of Jefferson Medical College of that day. He paid tributes to the work of Gerhard, who was the first in this country to make the distinction between typhoid and typhus fever, and J. K. Mitchell, who was the first to teach the germ origin of malarial fevers. Dr. William Power of Baltimore was, he said, the best teacher he ever knew, and the first to use quinin in full doses for the relief of the paroxysm of malarial fever. He then spoke of the discoveries of the past half century and compared them with those of previous times, and said that no one should allow himself to be engrossed with the present to the exclusion of the past.

### The Second Day.

DR. ROBERT W. JOHNSON reported "Twenty-five Recent Operations for Wounds, etc., of Abdominal Viscera." Dr. William H. Pearce read a paper on "Medical Communism," in which he argued that physicians who make important discoveries in medicine should derive pecuniary benefit from them as they do from their books, and illustrated his ideas by a reference to the case of the late Dr. Walter Reed. Dr. Charles O'Donovan discussed the "Water Supply of Baltimore," and urged that the city should buy the watershed. In the afternoon papers were read by Drs. C. F. Davidson, Robert Reuling, John C. Hemmeter, H. Woods, Jr., W. B. Wolf, H. F. Cassidy, F. C. Boyne, J. Friedenwald, L. J. Rosenthal, W. S. Baer, H W. Kennard, T. R. Brown and T. Cooke, Jr.

### Poison Law.

At the business session a committee was appointed to confer with a delegation from the Maryland Pharmaceutical Association with a view to urging before the legislature a law prohibiting the sale of poisonous substances by unauthorized persons. A motion to form a woman's auxiliary to assist in raising funds for a new building was referred to the executive committee. A committee was formed to found a "Fund for the Relief of Widows and Orphans of Deceased Members."

### Presentations.

A portrait of Dr. Aaron Friedenwald was presented by his son with a eulogy pronounced by Dr. T. S. Latimer.

Dr. Osler presented a crayon portrait of Dr. John Crawford, and oil portraits were also presented of Drs. Edward White and J. R. W. Dunbar.

### Election of Officers.

The following officers were elected: Dr. Eugene F. Cordell, Baltimore, president; Drs. Franklin Buchanan Smith, Frederick, and James M. Craighill, Baltimore, vice-presidents; Dr. J. Williams Lord, Baltimore, secretary; Dr. Thomas A. Ashby, Baltimore, treasurer, and Drs. Harry Friedenwald, G. Lane Taneyhill, Samuel Theobald and John D. Blake, all of Baltimore, executive committee.

### Tuberculosis.

At the third day's session Dr. H. Barton Jacobs read a paper on "Our Need of a Mountain Sanatorium for Indigent Consumptives," and the subject of tuberculosis and its prevention was discussed by Drs. Welch, Thayer and Fulton. All advocated notification, and Dr. Thayer urged public sanatoria for both incurable and incipient cases and also public lectures throughout the state.

### Other Papers.

Dr. C. Hampson Jones and Wm. Royal Stokes exhibited slides of smallpox patients and tissues.

Dr. J. Clement Clark spoke on the "Increase of Insanity."

Other papers were read by Drs. R. P. Smith, E. B. Claybrook, John Turner, W. F. Skillman, Frank Martin, H. H. Young, A. G. Barrett and L. K. Hirshberg.

At the evening session Dr. Simon Flexner delivered the annual oration on "An Aspect of Modern Pathology."

Dr. C. C. Bombaugh read a poem on "Preventive Medicine."

Drs. L. A. Griffith of Upper Marlboro and J. A. Stevens of Oxford were elected to fill vacancies on the board.

### Chairmen of Committees.

The following chairmen of committees were appointed: Library, Dr. G. J. Preston; publication, Dr. J. W. Lord; memoirs, E. F. Cordell; ethics, S. Theobald; legislation, William H. Welch; program, H. O. Reik; membership, W. S. Gardner; general sanitation, Jas. Bosley; finance, T. A. Ashby; county medical societies, C. M. Ellis; delegates to American Medical Association, Drs. Wm. H. Welch and William Osler, with Thomas L. Cullen and S. T. Earle, Jr., as alternates. Dr. H. M. Hurd was elected a trustee.

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## FOURTEENTH INTERNATIONAL MEDICAL CONGRESS.

*Held at Madrid, April 23-30, 1903.*

(By Cablegram and Letters.)

(*Concluded from page 1600.*)

### Medicine and Classic Paintings.

In the second general session Holländer, Berlin, gave a lantern address with views of about 200 paintings from public and private galleries which had been inspired by medical subjects. He spoke in Spanish, and dwelt particularly on the so-called anatomic paintings in which he claimed that the Dutch school reached its highest eminence.

### Section on Medicine: Importance of Routine Medication.

Dr. J. B. Obregon read this paper and emphasized the long history and the logical importance of the counter-irritant method of treatment. Its action, he said, is most manifest in certain cases of acute edema laryngis and bronchiolitis in which prompt vesication immediately turns the tide of the disease. It is also indicated in all forms of internal inflammation in which it can be applied.

### Pneumatic Bulbs for Aseptic Hypodermic Injection.

Dr. Pierre Laurent, Bois-Colombes, proposed a method by which the flow of the fluid from bulbs containing medicaments for hypodermic use may be facilitated. He suggests that the excess of space in the bulbs be filled with gas under pressure.

### Physiology and Therapeutics of Hypnotics and Narcotics.

Dr. V. Peset y. Cervera read a paper on this subject, in which he said that these agents are to be divided into those that exercise a direct effect on the brain and those that produce sleep indirectly. As has been shown by histologic and chemical methods, cerebral fatigue depends on an actual alteration in the nervous substance. These changes probably interest chiefly the nucleinic acid and are induced by insufficient oxidation or the action of certain leucomains. The direct hypnotics appear to act in the same manner, but more harshly. The indirect hypnotics and hypnotism act on the brain secondarily through the nerves, respiratory and cardiac functions. The theory of the retraction of the processes of the nerve cells does not satisfactorily explain normal or pathologic sleep. The state of the intracranial circulation expresses the successive phases or grades of the action of the pharmacological hypnotics: 1, Active congestion (excitation); 2, relative ischemia (hypnosis); 3, passive congestion (narcosis). As there is no sleep center, the action must be a general chemical one on the brain.

### The Protective Role of Human Saliva.

Dr. Miller, Berlin, described the relations of the saliva to dental caries and other infectious diseases of the mouth. He has found that the saliva of man, *per se*, possesses absolutely no antiseptic or protective properties. Sulphocyanid of potassium has no bactericidal action, nor has the buccal mucosa. The saliva does not contain cytases, nor is it hemolytic. The secret of antisepsis of the buccal cavity lies in the buccal flora. They crowd out and eliminate the majority of saprophytes and pathogenic bacteria by simple outgrowth. Phagocytosis plays an important rôle in the diseases of the soft parts. The character of the teeth predetermines to a great extent the occurrence of caries.

Dr. C. E. Nammack, Utica, N. Y., described the six varieties of climate in southern California, which he calls "The American Italy."

### The Influence of the Toxins of Diphtheria and of Tetanus on the Blood.

Dr. H. Kucharzewski, Warsaw, detailed the results of laborious experimental research on the effect of subcutaneous doses of the toxins of diphtheria and tetanus, as shown by changes in the corpuscles, the hemoglobin and the specific gravity of the blood. The results, in general, were the same for both. The erythrocytes and the quantity of hemoglobin are diminished by large and medium doses, while the specific gravity is increased. A polynuclear hyperleucocytosis is present which is at its height in the agony, but which declines gradually in the cases which are not fatal (small doses). In cases which are fatal there is a diminution of the lymphocytes and of the eosinophiles; in non-fatal cases the latter are increased. In infectious diseases, examination of the blood may thus give valuable prognostic indications, depending on the relative increase (favorable) or decrease (unfavorable) of the eosinophiles.

### Rational Treatment of Tuberculosis.

M. Monier, Liège, is of the opinion that all our mistakes in phthisiotherapy are traceable to the notion that we can attack the bacillus. The only method of treating tuberculosis is to build up the organism by zomotherapy, fresh air and full feeding.

### The Soil for Tuberculosis.

One of the most interesting communications was by A. Robin, Paris, in which he presented his views, which have been fully reviewed in THE JOURNAL. He claims that the predisposition to tuberculosis is characterized by exaggerated oxidations and demineralization of the organism, evidenced by declining strength and resisting power. Tonics and stimulants aggravate the evil. Treatment should aim to restrict the oxidating processes, to restore the normal proportion of mineral substances and to combat the tubercle bacilli by local medication, such as inhalation of antiseptics or creosote by the rectum, to be eliminated by the bronchi.

### Section on Surgery.

The honorary presidents appointed were Ceccherelli, Parma; Villems, Brussels; Le Dentu and Doyen, Paris; Küster, Marburg, and Sonnenburg, Berlin.

### Radical Cure of Femoral Hernia.

Dr. O. v. Lassen, Denmark, said that the methods of Salher or of Schwartz, by which a muscular flap of the pectineus was dissected off and attached to the crural canal were inefficient, inasmuch as the muscle tends to atrophy. He prefers to suture the fascia of the pectineus to Poupart's ligament as far as the falciform process, introducing his needle armed with not too fine gut, but a little deeply into the muscle itself, and taking five or six stitches. The method is applicable in nearly all cases. He has seen only 3 recurrences in 45 cases, although 31 were of two to six years' standing. The recurrences were due to exceptional circumstances and therefore excusable.

### Surgical Treatment of Cutaneous Tuberculosis.

Dr. H. Morestin, Paris, said that extirpation was the only method of treatment.

In a second communication he described a plastic operation for prominent ears, comprising the excision of the posterior bands and of pieces of cartilage.

In a third communication he reviewed the methods of cheiloplasty, and in a fourth described an esthetic operation suitable for cases of slight inguinal hernia, in which the incision is made in the hairy region over the pubes, horizontally or vertically. It is especially suited to congenital cases, and does not permit of complicated sutures. (Described in THE JOURNAL, page 1543.)

### Epiploitis After Resection of the Omentum.

Dr. J. Ortiz de la Torre, Madrid, pointed out that the numerous sutures which had to be sunk in the abdomen, in cases of hernia in which the omentum was resected, multiplied the chances of infection. It manifests itself eight to ten days after operation by fever, pain and tenderness. It tends, rather slowly, to the formation of abscesses, which point either to the exterior or to the intestine, and tend to be well walled off from the peritoneum by adhesions. Treatment should be expectant and narcotic until the abscess points. The speaker urged hemostasis in epiploiectomy by some other method than suture.

### Surgery of the Stomach.

Dr. Cecherelli, Parma, reviewed in detail the various maladies of the stomach and posed as a champion of surgical intervention. He asserted that in very many cases operation accomplished its object, not by attacking the primary malady, but simply by permitting the stomach to empty itself more freely. The organ thus gains the repose necessary to recovery. He holds that even the functional disorders, if severe, indicate operation. Cardenal, Barcelona, thinks that the "pyloric triad" demands operation, and all cases of certain neoformation, even without severe symptoms, and all dubious cases with rapid decline of weight and strength. He regards gastroenterostomy as the best palliative measure against hemorrhage and perforation, and sees no reason why cancer of the stomach should not be cured by radical extermination as in other localities. Hartmann, Paris, is rather inclined to restrict gastroenterostomy in favor of resection in intervention on the stomach.

### Heat for Tuberculosis.

Dr. S. Clado, Paris, extolled the application of heat to local and accessible foci as a valuable measure in tuberculous infection.

Dr. T. A. Fort, Paris, said that linear internal electrolysis is easy and almost painless. There is little loss of blood and little danger of urinary fever. No permanent sound is necessary. There is immediate relief and no shock. In 50 cases his mortality has been *nil*. It is superior to gastrostomy in case of stricture of the esophagus, on condition that it is permeable.

Dr. W. Nagel, Berlin, described his method of perineal suture after Tait for restoring the perineum.

Areilza and Arregni, Bilboa, described experimental research which showed that interposition of muscle tissue is a frequent cause for the non-healing of fractured bones and of pseudoarthrosis. They distinguish a special form of the latter due to destruction of the vessels and occlusion of the Haversian canals, for which amputation is the only relief. They call this form "pseudoarthrosis eburnea.'

San Martin, Madrid, is convinced that much of the danger of chloroform can be suppressed by avoidance of mouth breathing. He advocates administering the anesthetic through a single nostril.

### Iodoform Filling for Bone Cavities.

Silbermark stated that Mosetig has applied 445 fillings in 121 cases with the technic described recently in THE JOURNAL, page 1545. In one instance two-thirds of the diaphysis were removed and substituted by this filling with undisturbed healing.

### Pneumatic Instruments in Surgery.

L. Mencière, Rheims, exhibited his "revolver osteotome," which resembles a revolver in appearance and is operated by a trigger, the force supplied by liquid carbonic acid gas. The piston can strike 3,000 blows a minute on the pneumatic hammer armed with the osteotome or chisel. He thinks that there is a future for pneumatic instruments of this kind, as they are easy to manage, simple and inexpensive. Any compressed or liquid gas can supply the power.

### Section on Obstetrics: Prognosis of Face Presentations.

Dr. W. Nagel, Berlin, combated the general belief that face presentations with chin posterior were of bad prognosis. He said that this position occurred as a very natural and frequent evolution of primary occipital presentation, and almost invariably righted itself by rotation of the chin anteriorly. Narrow pelves may prevent the entrance of the face, as of the head in other forms of presentation, and always indicated early version. Innate dolichocephaly, as contrasted with the acquired forms, is an important factor in face presentations.

### Operation for Retroflexio Uteri Mobilis.

Dr. A. Schücking, Pyrmont, fixes the portio vaginalis and the fornix posterior vaginæ by means of two circular ligatures of silver thread, which remain in place four to six weeks. In 18 cases the results were almost always satisfactory. In one case he replaced Schultze's pessary by an injection of paraffin into the anterior fornix.

### Treatment of Placenta Previa.

Dr. A. R. Simpson, Edinburgh, said that most cases of placenta previa demanded immediate bipolar version and slow extraction. If diagnosed late in pregnancy and the hemorrhage has not been severe, an expectant method is indicated. In primiparæ especially we should resort to preliminary tamponade of the vagina or hydrostatic dilatation. In marginal implantations the placental lobules may be separated from the inferior uterine segment with the finger, which permits the os to dilate without fresh hemorrhage. The third stage demands the greatest care, with, at time, tamponade of the uterus.

### Section on Pharmacy: Effects of Injections of Antidiphtheric, Antitetanic and Antistreptococcus Serum on the Blood.

Dr. H. Kucharzewski, Warsaw, read a paper on the effects of the subcutaneous injection of these various substances into rabbits, and also of normal serum taken from a horse. He found that these various sera produced exactly the same results when injected in various quantities as did corresponding quantities of the normal serum of the horse. Hence, he concluded that the effects were due to the serum, and not to the specific antitoxic content. In detail, small doses are without any effect. Moderate doses produce a slight hyperleucocytosis for two to three days. Massive doses slightly diminish the number of red corpuscles and the hemoglobin; do not affect the specific gravity, but produce a considerable increase of the polynuclear and diminution of the mononuclear leucocytes.

### Section on Rhino-Laryngology: Etiology of Ozena.

Dr. W. Freudenthal, New York, said that ozena is an atrophy of all the inner coats of the nose, due chiefly to excessive dryness of the air, complicated by the secondary invasion of a bacillus. The micro-organism can not enter unless the soil has been previously prepared in this fashion. Sinusitises are frequently secondary to the ozena.

### Atrophic Coryza.

Dr. E. J. Moure, Bordeaux, discussed in great detail the various forms of atrophy, rhinitis and ozena, and their combinations. As regards treatment, he said that it was sufficient in case of purulent ozena of adults to suppress the inflamed tissue and to employ nasal lavage. Massage with silver nitrate spray is an excellent mode of treatment. Hypertrophied mucosæ tend gradually to disappear, even if cocain and adrenalin do not affect them, and excision is very dangerous. In pseudoatrophic strumous ozena lavage and general constitutional treatment suffice to cure the rhinitis. Complicating sinusitises demand surgical intervention. Finally, in the true atrophic ozena, in young children, one should employ simply systematic lavage, until the patient has attained an age suitable for operative procedure. At this point the nasal cavity is reconstituted by means of interstitial injections of paraffin, which fill out the cavity and prevent the accumulation of foul-smelling, decomposing secretions.

### Section on Neurology: Folies Toxiques.

Dr. J. Galiana, Madrid, read a paper on those cases of chronic alcoholism in which mental degeneration entered as a complicating factor. In such cases the manifestations of chronic and of acute alcoholism are noticeably different from the pure types. In some of these cases acute attacks may resemble the suspension of mental functions of epilepties. The disturbances of chronic alcoholism are accentuated. The terminal dementia occurs earlier; instead of the motor system, it is the psychical system, as the point of least resistance, which first breaks down. Alcoholism tends to accentuate and develop all previously existent psychical anomalies. In epileptics it multiplies the number of attacks, but is never a cause of the disease *per se*. In hereditary neurotic or degenerative individuals, alcohol tends much more rapidly to induce delirium; a single debauch may thus precipitate a typical delirium in such cases. The speaker then proceeded to a discussion of the syphilitic psychopathies. Secondary syphilis produces psychical aberrations in degenerates, inducing these effects both through the mental anxiety, the anemia, and possibly cellular intoxications. True syphilitic psychoses are perturbations of the order of delirium, of dementia and of the motor functions. The last are of great diagnostic import, and may be either paralytic, convulsive, tremulous or ataxic. He then detailed the various clinical forms of syphilitic motor disturbances, especially pseudo-general paralysis. It is a factor in most cases of true general paresis which occurs notwithstanding early and thorough antisyphilitic treatment and also persists in spite of it.

### Resolutions Adopted by the Congress.

In anatomy the importance of topographic representations of the human body being generally recognized, professors of anatomy are asked to co-operate to have an extensive exhibit in this line at the next international congress.

In general pathology, an international committee was planned to revise and classify the known bacteria and study those newly discovered. The authorities were also asked to collect data in regard to the prevalence of rhino-scleroma in Spain. In pharmacy, the necessity of standardization of curative serums and of international unification of hypodermic injections and heroic drugs was recognized by a resolution to this effect. The section on neuropathology unanimously voted an appeal to the lay press to refrain from publishing the details of crimes, as the contagion of criminal impulses among the population is an established fact. Other resolutions were adopted in regard to the suppression of alcoholism and criminal responsibility, recommending for the latter the legislation on the subject in Portugal and the appointment of experts in mental affections to examine all criminals. Among the four resolutions adopted by the section on pediatrics is one that appeals for the revision of the entire chapter of infantile diplegias, while another urges the construction of more sanatoria for children in the country and on the coast. In dermatology, the committee appointed at the last congress to study the unification of optometric scales, was confirmed and ordered to report at the next congress. The section on otology advocated that the autopsy of deaf mutes should be obligatory in public institutions, and that otology should be included in the medical curriculum.

The general sessions adopted a resolution deploring the increasing multiplicity of languages at the international medical congresses and the confusion resulting therefrom, urging the necessity of adopting a common medium.

### Impressions at Madrid.

Many members of the congress commented on the comparative absence of saloons in Spain. Very little distilled or even fermented beverages are consumed and the dramshops, even in the large cities, are frequently a long distance apart. Folet mentions, in a letter to the *Echo Méd.*, that at a popular and fashionable restaurant he noticed only one person taking a small glass of cognac in the crowded rooms. During the bull fight the cries of men selling "pure water" were heard on every hand. The enthusiasm of the spectators at the horrors of the bull slaughtering was an interesting psychologic study to the visitors.

The meetings of the sections were held in halls opening into each other, so that the proceedings were disturbed by persons passing through to rooms beyond. The confusion in regard to announcements was also great as the thousands of members gathered at one or at most two small wickets clamoring for information of all kinds. Hundreds of the members gave up the attempt and more were to be found in groups in the world-famous picture galleries than in the section meetings.

The visitors were favorably impressed by the standard of medical science in Spain. Also by the cordial welcome they received, although it was somewhat marred by the cupidity of the general public.

A bull fight had been planned as one of the official entertainments, but this plan was abandoned and the members who attended the bull fights had to pay for admission. The fêtes were all remarkably brilliant and interesting. It was curious

to note here and there in the scientific meetings some legal light, civil engineer or other non-medical member of the congress.

## Therapeutics.

### Sciatica.

G. L. Bailey, in *Cincinnati Lancet-Clinic*, recommends, in the treatment of the acute attacks of sciatica, that the patient be placed in a reclining position in a hot-air apparatus with all the body inclosed, except the head. The affected limb should be comfortably bolstered up and temperature gradually raised to 240 F. or 260 F., according to the toleration of the patient. During this process he should be induced to drink freely of cool water, and ice cloths should be applied to the head. The patient should be allowed to remain in this position for one hour, followed by an alcohol rub, and then he should be put to bed with the limb well supported.

This treatment should be followed out daily for five or six days, when the pain will have been relieved sufficiently to allow gentle massage giving firm pressure over the nerve, and at its point of exit from the pelvis. As the pain subsides the massage may be given deeper and harder. The patient will usually find complete relief within two or three weeks. In the chronic cases the treatment is practically the same, except that more vigorous massage may be given. Nerve stretching may be accomplished by deeply grasping the muscles of the thigh while the patient is lying on his face and the nerve forcibly pushed and pulled by the operator. With the patient lying on his back, the thigh flexed on the abdomen with the leg extended serves a similar purpose for stretching. Massage and electricity, both galvanic and faradic, are valuable in restoring the atrophied muscles and the circulation. The patient should be instructed to carry out such exercises at home as will tend to produce a stretching of the sciatic nerve and give exercise to the muscles.

Metcalf recommends the following in the medicinal treatment of sciatica:

℞. Tinct. aconiti
Tinct. colchici sem.
Tinct. belladonnæ fol.
Tinct. cimicifugæ, āā ..... 3ii 8

M. Sig.: Six drops every six hours.

The glycerophosphates are valuable in the treatment of the chronic forms as follows:

℞. Calcii glycerophos.
Sodii glycerophos., āā ..... 3iss 6
Ferri glycerophos. ..... gr. xxx 2

M. Ft. capsulæ No. xxx. Sig.: One after each meal, three times a day; or:

℞. Calcii glycerophos. ..... gr. xv 1
Mag. glycerophos. ..... gr. xv 1
Pot. glycerophos. (75 per cent.) ..... 3ss 2
Sodii glycerophos. (75 per cent.) ..... 3iss 6
Aq. destil. ..... 3viss 25

M. Sig.: Inject thirty to sixty drops into the seat of the pain once daily.

Locally the following may be applied once or twice daily:

℞. Acidi salicylici ..... 3ss 2
Ichthyol
Olei hyoscyami comp.
Lanolini, āā ..... 3iv 15

M. Sig.: Apply locally.

### Hay Fever.

According to L. B. Lecard, in *Boston Med. and Surg. Jour.*, the treatment of hay fever is either preventive or palliative. With the proper preventive treatment from 60 to 80 per cent. of the cases may be rendered immune, and by the palliative treatment a large majority of the cases may be given complete relief.

The preventive treatment as outlined by the author consists, locally, in correcting deformities and cauterizing the sensitive areas lightly with the galvano-cautery. The constitutional treatment should be started four or five weeks before the usual commencement of the attack. The object of this form of treatment should be to increase the elimination and decrease the production of uric acid, to correct any neurosis present and other abnormalities.

To increase the elimination and decrease uric acid production, alkalies, lithia and sodium salicylate should be given, together with a proper regulation of the diet. Chloretone should be administered as a nerve sedative, giving it just previous to an expected attack. The palliative treatment consists in the use of adrenalin locally, followed by an oily spray. If this does not check the excessive nasal secretion morphin or atropin will usually control it or caffein and suprarenal gland may be given internally.

The patient should wear smoked glasses for the eyes and use adrenalin solution or boric acid and camphor water as an eye wash.

As a local application in the treatment of hay fever Yeo recommends the following:

℞. Resorcin ..... gr. iss 09
Sod. chloridi ..... gr. iv 25
Acidi acetici ..... m. ii 12
Aquæ q. s. ad ..... ʒi 30

M. Sig.: Apply locally with a brush or a swab and repeat the application frequently.

Hydrozone may be used as a local application as follows:

℞. Hydrozone ..... ʒss 15
Aq. destil. ..... ʒvi 180

M. Sig.: Apply as a nasal douche four times a day, beginning two weeks before the expected attack. The author also recommends a local application of deodorized cod-liver oil sprayed into the nares every three hours.

### Constipation.

The following combinations are recommended by Huchard in *Prog. Medical*, in the treatment of constipation:

℞. Pulv. glycyrrhizæ
Pulv. sennæ, āā ..... ʒii 60
Sulphuris
Pulv. foeniculi, āā ..... ʒi 30
Pulv. sacchari ..... ʒvi 180

M. Sig.: One or two teaspoonfuls at a dose; or:

℞. Sulphuris sublim.
Magnesiæ (calcined), āā ..... gr. lxxv 5

M. Ft. chart. No. x. Sig.: One powder every two or three hours; or:

℞. Magnesiæ (calcined) ..... ʒiiss 75
Lactose ..... ʒiss 45

M. Sig.: One teaspoonful in a little water on rising in the morning; or:

℞. Magnesiæ
Sod. benzoatis, āā ..... gr. xxxvi 2 40
Pulv. rhei ..... gr. lxxv 5
Pulv. nucis vom. ..... gr. viiss 50

M. Ft. chart. No. x. Sig.: One powder as necessary to correct the constipation.

Burnett, in *Med. Summary*, recommends the following in the treatment of constipation:

℞. Sulphuris ..... ʒss 15
Pulv. rhei ..... ʒii 8
Pot. et sodii tartratis ..... ʒi 30
Sacchari albi ..... ʒss 15
Pulv. cinnamomi ..... ʒss 2

M. Ft. chart. No. xvi. Sig.: One every two hours in water.

### Epilepsy.

The following combination, according to Morrow in *Med. Summary*, is of value in checking epileptiform seizures:

℞. Potass. bromidi ..... ʒss 15
Chloralis hydratis ..... ʒss 2
Tinct. hyoscyami ..... ʒiiss 10
Ext. cannabis ind. flu. ..... ʒii 8
Aquæ q. s. ad ..... ʒiv 120

M. Sig.: One teaspoonful every four hours during the day.

### Acute Attacks of Gout.

The treatment of the acute arthritic attacks in gout, according to Wilson in *Applied Ther.*, should consist of rest in bed and elevation of the limb. The following is recommended locally:

| | | | |
|---|---|---|---|
| R. | Atropinæ | gr. iii | 20 |
| | Morph. hydrochlor. | gr. xv | 1 |
| | Acidi oleici | ℥i | 30 |

M. Ft. linimentum. Sig.: To be painted over the painful joint with a brush and followed by bandaging the joint with absorbent cotton; or:

| | | | |
|---|---|---|---|
| R. | Ext. opii | gr. xlv | 3 |
| | Ext. hyoscyami | ℥ss | 2 |
| | Adipis | ℥i | 30 |

M. Ft. unguentum. Sig.: Apply to the painful joints with cotton wool; or:

| | | | |
|---|---|---|---|
| R. | Ichthyol | ℥i | 4 |
| | Ung. bellad. | ℥ii | 8 |
| | Ol. petrolati | ℥iss | 6 |

M. Ft. unguentum. Sig.: Apply locally night and morning; or:

| | | | |
|---|---|---|---|
| R. | Pulveris lini | ℥iv | 120 |
| | Aq. bullientis q. s. | | |
| | Guaiacol | gtt. xx | 1 |
| | Glycerini | ℥i | 4 |

Misce: Mix the glycerin and guaiacol and spread on the flaxseed poultice and place it on the affected joint; or:

| | | | |
|---|---|---|---|
| R. | Linimenti belladonnæ | ℥iii | 90 |
| | Morph. hydrochloratis | gr. x | 65 |

M. Ft. linimentum. Sig.: One teaspoonful to be mixed with a tablespoonful of hot water and applied on lint under oil silk every four hours.

The following combinations are recommended by *Merck's Archives* as internal medication in the treatment of chronic gout:

| | | | |
|---|---|---|---|
| R. | Formin | ℥i | 4 |
| | Lithii salicylatis | ℥iss | 6 |
| | Aq. menth. pip. | ℥iii | 90 |
| | Syrupi | ℥ii | 60 |

M. Sig.: One tablespoonful in water two or three times a day.

[The formin in the foregoing prescription is a crystalline powder, soluble in water and alcohol. It is identical with urotropin and aminoform and is a uric acid solvent and genito-urinary antiseptic.]

The following is also of service in the treatment of chronic gout:

| | | | |
|---|---|---|---|
| R. | Lithii brom. | ℥i | 30 |
| | Sol. potass. citratis | ℥iv | 120 |
| | Vini colchici rad. | ℥i | 30 |
| | Syr. tolutani | ℥i | 30 |

M. Sig.: One teaspoonful well diluted in water after each meal; or:

| | | | |
|---|---|---|---|
| R. | Pot. iodidi | ℥iv | 15 |
| | Vini colchici sem. | ℥iv | 15 |
| | Tinct. stramonii sem. | ℥ii | 8 |
| | Tinct. cimicifugæ | ℥vi | 24 |
| | Tinct. opii camph. q. s. ad | ℥iii | 90 |

M. Sig.: One teaspoonful three or four times daily.

## Medicolegal.

**Refusing Examination—Motion for Specimen of Urine.**—The Court of Civil Appeals of Texas holds, in Austin & Northwestern Railroad Company vs. Cluck, not only that, in the absence of a statute authorizing it, a court has no power to compel a litigant to submit his or her person to examination by a physician or any one else, but that a refusal to consent to be examined by a committee to be appointed by the court can not be shown on cross-examination before the jury. Having the legal right to refuse to submit to such an examination, the other side, the court holds, have no right to prejudice the party before the jury by showing an exercise of such legal right. Furthermore, the court holds that if it be conceded that the trial court had the power to compel the party who brought this action to recover for personal injuries to furnish a specimen of his urine for examination by physicians to be appointed by the court, before the other side could be heard to complain on appeal, it must be made to appear that their motion seeking to accomplish that result was seasonably made. The end which they had in view (which was an examination of the party's urine by a committee of physicians appointed by the court) would have required time for its accomplishment. The party would have been entitled to a reasonable time, in the due course of Nature, to furnish the urine, and the court would have been entitled to a like time within which to procure competent physicians to make the examination, and the latter would have been entitled to reasonable time within which to make such examination. For aught that appeared in the record, to have granted the motion at the time it was made might have resulted in an unreasonable delay in the trial; wherefore, the court of appeals holds that it was not made to appear that error was committed in overruling a motion to compel the party to furnish a specimen of his urine for such an examination.

**Communication of Smallpox by Incompetent Nurse.**—The Court of Civil Appeals of Texas holds, in Missouri, Kansas & Texas Railway Company of Texas vs. Freeman, that when the company took charge of one of its employes for the purpose of isolating, nursing and treating him for smallpox—a dangerous and infectious disease—it assumed and owed a duty to the public to employ competent and experienced persons and agents to perform that duty. It took the risk of all consequences of a wrongful execution of that duty, resulting from the incompetency of a nurse or guard so employed by it. It was the duty of the company's surgeon to employ a person as nurse or guard who had sufficient intelligence and discretion to remain isolated, and not leave the camp and go on the public streets, where he would likely come in contact with persons who had not had the disease, without first disinfecting his person and changing his clothes. It was the negligence of the company's surgeon in employing an incompetent nurse or guard that placed the latter in a position where he could, by reason of his negligence and incompetency, communicate the disease to others. And the court thinks that the company is liable where, as in this case, it employs an incompetent servant, and puts him in charge of a pest camp containing persons afflicted with smallpox, to isolate, nurse and guard such persons, and the servant, by reason of his want of discretion and incompetency, negligently leaves the camp and goes on the public streets of the city, and communicates the disease to another. If one to whom the nurse communicated the smallpox knew that the latter was a guard or nurse at a pest camp, but at the time he met him on the street was under the impression that he had disinfected his person and changed his clothes, and would not communicate the disease, then it was for the jury to determine whether such person was guilty of negligence in so coming in contact with such nurse.

**Validity of Practice Acts—Who Exempted Practitioners.**—The Supreme Court of Washington says, in the case of State on relation of J. W. Smith vs. Board of Dental Examiners, that the wisdom of such regulations, pertaining not only to dentistry, but also to the practice of medicine and surgery, is apparent. It is of the highest importance to the state that suffering and afflicted humanity shall not be subjected to the care and treatment of unlearned and unskilled persons. In its effort to prevent such a misfortune to its people, the state may adopt a standard for the test of fitness to engage in the work of what should be a learned profession. When that standard is adopted, those who assume to do the work of such a profession must prove their fitness by the test of such standard. Otherwise they violate the law, and can not be recognized by the state as practitioners of a lawful profession when they seek to follow it in an unlawful way. And where there was a proviso that the section of an act requiring an examination to practice dentistry should not apply to persons engaged in the practice of dentistry at the time of the passage of the act who were *bona fide* citizens of the state, the court says that it must be held to refer to the practice of dentistry as it was then recognized by law. It thinks that it should

presume in this connection that, when the legislature used the words "persons engaged in the practice of dentistry," it did not intend to include in that class persons who had never complied with the existing law entitling them to engage in such vocation, and who had furthermore openly and continuously violated that law. The persons exempted from the examination were those who had complied with the law, for they were the only ones actually practicing dentistry, as that term must be construed in the light of lawful regulations. The subject of an act being to regulate the practice of a given profession, the court holds that the legislature may include in the act the means related to the subject for effecting the object sought.

**Probability of Insanity as a Defense to Crime.**—The Supreme Court of Iowa says, in the homicide case of State vs. Thiele, that the existence of disease in the brain of a living being is seldom the subject of demonstrated or direct proof. Of necessity, reliance must be placed on outward manifestations, and from these the inference drawn as to the condition of the brain. The conduct and speech of a party are not always the true index of mental capacity or incapacity. Cases of feigned insanity are not infrequent, and about all courts are able to do in most cases is to speak from the evidence as to the probability or improbability of the accused having been insane at the time under investigation. By saying insanity is probable is meant, as understood in common parlance and from the definition of lexicographers, that there is more evidence of insanity than against it, or better reason to believe the accused insane than to suppose him sane. In this case the jury were told, in effect, that, even if it were made to appear probable that the accused was insane, he must be held accountable for his act. And more, that such probability would not alone overcome the presumption of sanity. He must have gone still farther and introduced evidence to overcome this presumption, and then, in addition thereto, satisfy the jury of his insanity by a fair preponderance of the evidence. But the supreme court holds that there was error in this. It says that even if the presumption were to be accorded some probative force rather than treated as a mere rule concerning the burden of proof, it ought not to be offset in this way against the probability of the accused's insanity. Sanity is the normal condition, and the presumption that it exists goes no farther than the assumption, for the purposes of the trial, that the accused is not different in this respect from other men. The law does not undertake to measure the precise amount of evidence which, when undisputed, will rebut this assumption and justify the conclusion that a person is abnormal, save that it must be enough to convince the understanding. But the jury are not to be told that the presumption is of no consequence in weighing evidence, or that it is not to weigh the presumption of the accused's sanity against any measureable amount of evidence of insanity; for an appreciable weight of evidence is required to establish the existence of an abnormal condition of the mind. Not until the evidence indicates that the existence of insanity is probable, that is, is such as to render this conclusion more reasonable than a contrary inference, has the assumption that the party under investigation was in a normal state been overcome.

## Current Medical Literature.

### AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

#### Medical Record, New York.

*May 30.*

1 *Primary and Recurrent Mammary Carcinoma Treated by the X-Ray. William J. Morton.
2 *The Treatment of Purulent Conjunctivitis. Edgar S. Thomson.
3 *Notes on Cases Treated by Venesection. George P. Andrews.
4 *On the Active Principle of Rhus Diversiloba (Poison Oak). Carl Schwalbe.
5 *Reflex Symptom from Biliary Calculus. G. W. Squires.

1. **Mammary Cancer Treated by the X-Ray.**—Morton describes the utility of the *x*-ray in cases of mammary cancer and reports a number of cases treated by this method. He uses no shield except for the hair of the head, eyebrows, etc., covering the nipple with a small metallic disc for part of the time. Dermatitis was intentionally carried to the purplish stage, followed by exfoliation and effusion of serum, and in some cases a purulent discharge. In all but one, complete recovery of the skin occurred in from one to four weeks. These areas of dermatitis have often occupied the entire skin area of one breast and axilla. The patients are frequently *x*-rayed from behind the scapula. He thinks this measure is of importance as the deep fasciæ of the muscles of the chest may be affected and the thorax offers but little resistance. The clavicle and ribs may shield infected areas behind the bones. He does not hope for good results unless dermatitis is produced. He has never overstepped the bounds and reached necrosis, but has escaped this only by adhering to the most rigid and exact technic as to time and exposure, distance of tube, force of radiation, and number of treatments per week. The technic is fifteen minutes, 9 inches, high tube (corresponding to a six to ten inch spark gap), clear view of end of radius and ulnar at two feet, and three times weekly. The question of diagnosis is mentioned. He thinks the margin of error is small. Severe dermatitis should certainly be avoided. What is desired would seem to be to set up a mild leucocytosis with tissue reparation, and if in the case of a mammary and unbroken cancer the skin intervenes, this latter suffers a dermatitis lesion merely to enable the operator to set up a similar but lesser lesion in the deeper tumor area. He has often noticed in cases of primary carcinoma that whenever the patient complains of soreness of the skin, she also remarks that the tumor is unusually sensitive. In superficial or ulcerating carcinoma milder treatment with no dermatitis will suffice. It would not be wise, he thinks, to try to do with the *x*-ray what might better be done by the actual or other cautery or by the knife, and the best future for the *x*-ray and phototherapy in general would be extreme conservatism and desistance from the invasion of surgical procedures which offer an alternative of relief or cure to the patient, superior to what the radiation treatment can offer. He holds it as generally admitted that it is advisable to follow up operated cases with radiation to prevent recurrences.

2. **Conjunctivitis.**—Thomson describes the various methods for meeting conjunctivitis according to its type. He thinks there is nothing that will supplant silver, but some of the new germicides seem of value where silver is not well borne. It is imperative in adult cases, and especially in gonorrheal conjunctivitis, to apply medical applications as early as possible. If the gonococcus once has a chance to penetrate the conjunctival tissue thoroughly the eye will probably be lost. In babies the results are not apt to be so serious, but in every case the application of silver should be as early as possible. It is impossible to lay down rules as to the limits of time when the abortive plans of treatment may be used, but he always attempts it when there is any prospect of success. If he sees the case two days after the infection and the swelling and discharge are not at their greatest height, he applies a 3 to 4 per cent. solution of nitrate of silver as thoroughly as possible, and meets the further indications as they arise, using a 2 per cent. solution as a daily application. When using a stronger than 2 per cent. solution it is well to neutralize with salt solution on account of the danger of staining of the cornea. Where silver irritates, as shown by the increased discharge of serum and a tendency to bleed, a 6 per cent. solution of protargol may be used. This is not non-irritating, though less irritating than silver. It is a valuable drug in ophthalmia neonatorum and wherever the conjunctival thickness is not enough to support nitrate of silver applications. It may be dropped in the eye twice daily. In other forms of purulent discharge due to the pneumococcus, Koch-Weeks' bacillus or other pus organisms, protargol in a 6 per cent. solution once daily is a most valuable germicide. It does not stain the tissues like the nitrates, and it is good practice to flood the corneal ulcer occurring in the course of a gonorrheal conjunctivitis with a 6 per cent. solution once a day. It does stain the conjunctiva if continually used. Argyrol, 25 per cent., meets the indications of pro-

targol and is not irritating. It is less effective when an astringent is required, but as a non-irritating germicide it is ideal. The other indications for treatment in purulent conjunctivitis are best met on old lines, and the use of saturated boric acid solution, ice cloths to the lids, the use of argyrol, or protargol for corneal complications; in some few cases scarification in chemosis and cauterization of the cornea, where the chemosis is not severe, may be valuable means to prevent ulceration. Pure carbolic acid is the best cauterizing agent. When corneal infection appears hot-water applications are to be used for the purpose of stimulating the corneal tissues.

3. **Venesection.**—Ten cases of various conditions in which venesection was used, including pneumonia, eclampsia, asthma, dyspnea, etc., are reported by Andrews. In all the cases but one relief was prompt. The method cured in the sense that it tided over an emergency. He thinks there is possibly much value in this neglected therapeutic operation.

4. **Rhus Diversiloba.**—Schwalbe finds from his study of the cases as reported that there is little evidence of poisoning by diffusion of the toxin through the atmosphere. It must be directly applied and may be carried from one person to another by contact, but the fact that the skin of the face is the most susceptible and that it escapes in those cases where atmospheric contagion has been claimed, indicates that neglected contacts are really the causes of the trouble. Persons perspiring easily are more liable than others. Neutral soap will not clear out the hairs containing the poison; an alkali is required to neutralize it. A 1/10 to ½ per cent. solution of carbonate of potash applied several times a day is sufficient to protect everybody against the bad effects of this interesting plant.

5. **Biliary Calculus.**—Squires reports a case where severe pain and an eruption on the heel was the result of a biliary calculus and was immediately relieved on its removal *per vias naturales*.

### Medical News, New York.

*May 30.*

6 Professional Discretion. The Medical Secret. (To be continued.) Prince A. Morrow.
7 *A Report on the Physics and Therapeutic Value of Cathode and Ultra-violet Rays; with References to the Electromagnetic Theory of Light. An Attempt to More Clearly Define the General Character of Those Recently-Introduced Agents in the Treatment of Cancer. Roswell Park.
8 *The Cure of Anal Fissure without Operation; Report of Eight Cases. S. Lewis.
9 *The Therapeutic Use of Suprarenal Gland in Certain Diseases of the Skin. Martin F. Engman and William P. Loth.
10 On Simplicity in the Operation for Laceration of the Cervix Uteri. Louis Kolopinski.
11 Tuberculosis of the Larynx and Aspiration Tuberculosis of the Lungs Following Dermatitis Blastomycetes. Otto T. Freer.

7. **Radiotherapy.**—Park discusses the physical principles underlying radiotherapy, and offers the following conclusions as safely warranted in regard to the therapeutic effects of the *x*-rays and ultra-violet rays: 1. They afford methods of treatment for extremely new growths of limited area and superficial character, which, while not exactly certain, are extremely promising. 2. They not only cause no pain, but tend to relieve pain, both superficial and deep, in a most pleasing and satisfactory way. 3. They are adapted to cases which can hardly be submitted to any other method of treatment, and they afford more hope in delayed and inoperable cases than does any other method of treatment. 4. It will be found that the odor of putrefaction may often be suppressed by their use and the putrefactive process itself checked. 5. Burns and intense dermatitis, so frequently noted when the treatment first came into vogue, may now be almost entirely avoided. 6. More than this, they afford a supplementary method of treatment after operation by which the benefits of the same may be enhanced or enlarged. 7. It is not necessary to intermit such work as the patient may be engaged in in order to carry out the *x*-ray or phototherapeutic method of treatment. He remarks that too much must not be expected, and that what may be accomplished in deep cases is yet unknown. The *x*-rays have, however, been of apparent benefit in relieving pain, even deep seated.

8. **Anal Fissure.**—Lewis has found permanganate of potash applications in "anusol" suppositories night and morning curative in anal fissure. His worst case, in which all other means had failed, was cured by this treatment in ten days.

9. **Suprarenals in Skin Disease.**—Engman and Loth have tried suprarenal with good success in skin disorders dependent on vasomotor disturbance, pruritus, urticaria and lichen urticatus. They find a certain cumulative action on the nervous system that makes them use the drug with caution. It caused in repeated doses, 5 gr. 3 td., tremor of the extremities, aggravated by increased doses. For a child under 4 they give ½ gr. 3 td., gradually increased to 2 gr. Between the ages of 4 and 12, 1 gr., gradually increased to 3 grs. Above 12 the beginning dose may be 2 gr., increasing gradually to 6 gr.

### Philadelphia Medical Journal.

*May 30.*

12 Historical Sketch of Vaccination. Charles W. Dulles.
13 *The Treatment of Fracture of the Neck of the Femur at Bellevue, St. Vincent's and New York Hospitals. Joseph B. Bissell.
14 *A Case of Ulcerative Endocarditis Involving the Pulmonary Valve and Causing Perforation of the Ventricular Septum, Gangrene of the Nose and Ears, Multiple Infarcts in the Kidneys, etc. Henry M. Fisher.
15 A Report of a Case of Malignant Gonorrheal Endocarditis, with Specimens. C. J. Habhegger.
16 Preliminary Report of an Operation for Abdominal Pregnancy of Twenty-one Months' Duration. Charles P. Noble.
17 *Uterine Fibroma Near the Menopause. George E. Shoemaker.

13. **Fracture of the Neck of the Femur.**—Bissell describes the methods of treatment used in several hospitals in New York City. In St. Vincent's there were few of these cases in the year 1900, and only 41 cases since that time. The method used is a fracture board under the mattress, a Hamilton long side splint and Buck's extension with a weight, usually rather heavy, sufficient to reduce the shortening down to one-half inch or under. The Hamilton splint was removed frequently comparatively early, often at the end of the fourth or fifth week. No plaster dressings have been used during the three years. No deaths are recorded. In Bellevue 241 cases are reported from Jan. 1, 1900, to Jan. 1, 1903. The method employed is the fracture board, Buck's extension and the long Hamilton splint as the usual means. The weights were somewhat less than those at the St. Vincent's. Only in one case was the plaster-of-paris spica used from the beginning of treatment to the end. In a number of other cases, however, the plaster was applied after the Hamilton splint had been removed and shortening reduced as much as possible and no amount of weight seemed to reduce it further. In the New York Hospital there were 34 cases recorded. The usual treatment in almost every case was to apply the Hodgen splint. The fracture boards for the bed and occasionally Buck's extension were used with sand bags and moderately heavy weights applied until shortening was reduced as much as possible. The longest period a patient was kept in bed was sixteen weeks and the shortest six. Fifteen of the 34 cases were discharged as cured, 4 as unimproved, 14 as improved and 1 died from pneumonia occurring within twenty-four hours after admission. In none of the hospitals was any operation performed to unite the fractured surfaces, to remove a detached head or to carry on or assist in any manner the treatment. The largest percentage of cures was in the New York Hospital, which speaks well for the methods there employed. According to the author's experience, bed sores are a common intercurrent trouble in these cases, though this does not seem to be borne out by the histories as recorded in these hospitals. He thinks the difficulty of meeting the indications of perfect coaptation and immobilization of the fractured bone, together with attention to the health and comfort of the patient, can not well be met by the methods that have been employed. Coaptation and immobilization are perhaps, to a certain extent, met by the Hodgen splint, but much more is required, and the use of a hip splint, which would allow the patient to be up and about, and fixation by plaster of paris, are the only alternatives to an open operation down to the seat of the fracture and an accurate securing of the fragments by mechanical means, which would seem to him desirable. He holds that the risk of surgical operations in these cases is not so great as that of the tedious and slow and unsatisfactory treatment without cutting.

14. This article appeared elsewhere. See THE JOURNAL of April 18, title 53, p. 1105.

17. **Uterine Fibroma.**—Shoemaker has operated on a large number of cases near the menopause, several of which he reports. He holds the danger of operation in cases of this class, while greater than in simple abdominal sections, is not very great. The mortality should not exceed 6 per cent., and it is largely due to complications such as pyosalpinx, recurrent peritonitis or the effects of hemorrhage, all due to delay.

### American Medicine, Philadelphia.

*May 30.*

18 *A Clinical Report of Nine Cases of Friedreich's Disease; Hereditary or Family Ataxia, So-called, with Comments on Noteworthy Symptoms. Joseph Collins.
19 *Present Status of Congenital Dislocation of the Hip and the Bloodless Reduction. Virgil P. Gibney.
20 *The Forcible Reposition of Congenital Luxation of the Hip. Gwillym G. Davis.
21 Etiology and Treatment of Retrodeviations of the Uterus. Charles A. Robertson.
22 Strongyloides Intestinalis in Texas, with Report of a Case. John T. Moore.
23 *Streptococci Infections. Leonard K. Hirshberg.

18. **Friedreich's Ataxia.**—Collins describes the typical form of Friedreich's ataxia and notes the types that have been described. He gives two cases which he thinks illustrate the fact that the disease conforms to the classic type with some frequency. He calls attention to the uniformity of the clinical manifestations and also to some uncommon clinical features, such as preservation of the tendon-jerks, pes planus, manus cavus and an uncommon complication, the Menière symptom-complex, which occurred in one of the cases reported.

19. **Congenital Dislocation of the Hip.**—Gibney reviews the treatment of congenital hip-joint disease, and especially the effects of the Lorenz method. He considers stretching of the capsule an element of danger and unnecessary. The number of cases in which paralysis of the quadriceps femoris and leg muscles have developed indicates this. He offers in conclusion the following few points that seem to him to be paramount:

1. Do not rest content in a case of hip lameness in a young child until you have made a thorough examination of the patient and have obtained a full history of the case. 2. The diagnosis once established, aim to effect a reduction before the sixth or seventh year. It is fatal to postpone operation. 3. In patients beyond the age limit fortify yourself with a Roentgen ray picture in order to determine the exact position of the head, the shape of the same, and the relationship which the neck sustains to the shaft. 4. Do not make long attempts at reduction in patients over 10. 5. Bear in mind the dangers which Dr. Lorenz himself has warned against, namely, too extensive laceration of the soft parts, paralysis which may or may not yield to time and treatment, the fracture of the femur or the pelvic bones, rupture of an artery, sometimes the femoral.

20. **Congenital Dislocation of the Hip.**—Davis criticises the Lorenz method, holding that it is unnecessarily severe and has developed dangerous features, and maintains that the comparatively mild and gradual methods of Paci are preferable. Forcible traction, he holds, has no place in immediate reduction of congenitally luxated hips, and it is mainly responsible for the traumatisms that occur. If we are to avoid them we must adhere more closely to the original teaching of Paci, which consists simply in the application of the circumduction method of reducing traumatic luxations, by which the thigh is flexed on the abdomen followed by downward pressure on the knee with abduction, external rotation and gradual extension. The pressure is made on the trochanter posteriorly while the limb is carefully extended. Abduction is afterwards maintained to an extent sufficient to prevent the head from escaping from its new position. He prefers the fixation of the thigh on the abdomen to fixation at right angles with the body. He says that rather than resort to the great force now at times employed, he believes it would be much better to incise and clear a way for the head of the bone.

23. **Streptococci Infections.**—Hirshberg reviews the facts in regard to the various pathogenic streptococci, and holds that there is little warrant, with our present means of differentiating bacterial species, for dividing the streptococcus into eighteen or more species as is done. From the multiplicity of pathologic processes in which the streptococcus is invariably found, it is quite likely that there are distinct species or at least varieties of streptococci involved, but our present means of separating them proves it is open to considerable doubt.

### New York Medical Journal.

*May 30.*

24 *Clinical Observations on Backache. Robert W. Lovett.
25 *Cocain Herniotomy. Alexander Lyle.
26 *The Essentials for Aseptic Labor. A. Ernest Gallant.
27 The Eye in Its Relation to General Disease. Nathan D. McDowell.
28 *A Supposed Sarcoma of the Kidney Cured by *X*-ray Treatment. Charles H. Richmond.
29 *Notes on Two Cases of Urogenital Tuberculosis. Charles G. Cumston.
30 *Heredity and Tuberculosis. Maurice Packard and Lester L. Roos.
31 *Chronic Pneumonia. E. Palier.

24. **Backache.**—From an orthopedic standpoint certain well-defined types of backache present themselves which are divided roughly into two groups by Lovett, those due to causes existing in the spine itself and those due to external causes. The first of these are either mechanical or static, due to faulty attitude or the result of injury or inflammation. Among the first Lovett mentions faulty spinal attitude, in which the extra strain is borne by certain ligaments not calculated for them, hence pain follows from continuous ligamentous strain, especially when associated with stretched spinal muscles. In round shouldered, lax spined young woman pain is not infrequent and is familiar under the name of irritable or neurasthenic spine, and is generally localized in one or two points, is apt to be severe and aggravated by exercise. Stiffness comes on after a while, and in old cases the differentiation from Pott's disease and osteoarthritis may be difficult. The condition tends to grow worse with periods of improvement, and the cure lies in the development of the spinal muscles and the acquirement of an erect attitude by gymnastic exercises, at first mild, later increasing in force, following the line of the "setting up drill" of fthe military recruit. The physician must be sure of his diagnosis, for the same treatment is not suitable for Pott's disease. In lateral deviation of the spine, when due to a shorter leg on one side, pain is not uncommon and is often situated in one or the other of the sacroiliac joints, or in the loin or around the scapula. As far as Lovett's experience goes, the pain is on the convex side of the curve rather than on the compressed side. The correction of the shortened leg by a thick sole will in many cases do away with the backache. The causes due to injury or trauma include sprains of the back which are often serious, far more so in their symptoms than would be suggested by the anatomic conditions. In some cases it is impossible to make an off-hand diagnosis from Pott's disease. Instead of being put to rest like an injured ankle, it is the rule that the parts are kept in action and treatment is, therefore, embarrassed. In chronic or acute sprain absolute rest and fixation are necessary, or their restricted use. There is also a persistent backache without obvious cause, of which he has seen two cases. The patients were not neurasthenic; they stood well, their muscles were good, and they had suffered no injuries, and in both cases the condition was obstinate. In conclusion he mentions Pott's disease and arthritis deformans and the causes of backache existing outside the spine. Three conditions of the foot are mentioned, such as flatfoot, which is not common in private practice; pronated foot, which is more common, the weight of the body being transmitted diagonally through the arch instead of straight down, and pain and irritability result. This is most commonly called flatfoot, but it outnumbers the cases of real flatfoot many times over. Another condition is what is called contracted foot, which is very little known and but imperfectly understood. It is characterized by shortness of the muscles of the back of the calf and their stretching is necessary in the treatment. Backache is a common accompaniment. The pain from these three conditions is generally in the small of the back and is aggravated by stooping or standing. It also results from walking. The real flatfoot and pronated foot are easily treated by foot plates, and the backache disappears if this is the cause. In case of contracted foot, stretching of the calf muscle is necessary, and the under side of the foot must be supported by a pad or a short steel plate. The arch of the foot must be correctly supported.

25. **Cocain Herniotomy.**—Lyle describes his method of operating under cocain, insisting on the importance of keeping the

patient unaware of what is being done. It consists in blocking off the nerves by injection, careful dissection and practically the Bottini operation with the exception of the treatment of the sac, in which he follows the Macewen method, which, as we know, retains the sac, and pulling it with a purse-string suture or No. 4 catgut through the internal or deep ring, anchors it there by carrying this suture through the abdominal muscles and skin about an inch above the upper extremity of the skin incision, there winding the end of the suture around a small piece of sterile gauze. This leaves an obstruction in the internal ring. The advantages claimed for the method are, that we are saved the danger of general anesthesia to the heart, lungs and kidneys, that we cut no nerves, and therefore do not impair their function, and ligate no vessels; there is no shock, nausea or straining. The patient continues on the full diet and can enjoy a hearty meal immediately after the operation; all cases have healed by primary union. The patient is confined to bed for three weeks, after which time he may be about and return to work.

26. **Aseptic Labor.**—The essentials of aseptic labor are given by Gallant as follows: (*a*) a good-sized hand bag, to be used for this purpose and no other; (*b*) stocked with the necessary drugs; (*c*) steam sterilized gauze, gown and cotton ball sponges (several sets of which must be kept on hand); (*d*) hand brushes, silkworm gut, rubber gloves, and catheter, ready to be boiled in plain water; and (*e*) a set of metallic instruments to be boiled in soda solution when needed. As a time-saving measure these supplies, dressings and instruments should be arranged on a table standing conveniently near the accoucheur's right hand, and the drugs placed in a row on the mantel, to obviate soiling the bag and infecting the operator's hands. The hand cleaning can best be accomplished (without antiseptics) by the liberal application of the tincture of green soap, rubbed thoroughly into the dry hands and arms (two or three coats), working the soap well under the nails and between the fingers; then, when they are thoroughly coated and dry, scrubbing with a stiff brush, in running water, until all traces of soap have been scrubbed away. Before applying the forceps or introducing the hand into the vagina, cut short the hair, soap well, and scrub the vulvoanal region, the thighs and abdomen as carefully as you have the hands. Put on rubber gloves if the hands recently have been in contact with septic wounds or pus from any source.

28. **Sarcoma of the Kidney.**—In the case reported by Richmond, the patient had a swelling which crowded the liver and organs forward and inward. The posterior dulness reached as high as the eighth rib. There was a great loss of strength and flesh. The diagnosis made was that of sarcoma, which, however, was not verified by any exploratory operation. Night sweats were frequent, the patient became very weak; the tumor extended downward as far as the crest of the ileum. The treatment was the *x*-ray for nineteen consecutive days. At the end of that time the temperature had decreased to normal, night sweats were lessened; the tumor had apparently ceased to grow and seemed softer and the patient was generally improved. She was then sent to the hospital, where the treatment was continued, and at the end of nine weeks the growth had entirely disappeared as far as could be determined by bimanual examination. At the present time, April 1, 1903, she seems quite well, though she has not fully regained her powers of endurance. He intends to continue the *x*-ray treatment two or three times weekly for the next few months as a precautionary measure.

29. **Urogenital Tuberculosis.**—Cumston describes two cases illustrating the ascending and descending forms. He holds that the ascending form is generally more favorable than the descending type, because operative treatment is more easily accomplished, and also from the fact that an earlier diagnosis is far easier to make.

30. **Heredity and Tuberculosis.**—Packard and Roos review the literature as to the hereditary transmission of tuberculosis, and claim that it is not only a possible, but an important mode of transmission. They insist on the danger of transmission by heredity and the criminality of marriage of tuberculous patients. Experimental evidence by Friedmann shows that tubercle cultures injected into the vagina directly after sexual intercourse in rabbits produces infection of the ovum, which shows that sperm highly charged with tubercle bacilli may produce the same trouble. The authors also think that the tuberculin reaction is perhaps rather uncertain as a diagnostic method. Negative results are too frequent.

31. **Chronic Pneumonia.**—Palier reports a case which came on with an acute onset followed by very slow recovery lasting for several months. The condition, he thinks, is often mistaken for consumption, and change of climate and exercise advised, which is a mistake.

### Cincinnati Lancet-Clinic.

*May 30.*

32 *Diagnosis and Treatment of Empyema. With Report of Cases. C. M. Lenhart.
33 Subscription Problems. C. F. Taylor.
34 Surgery of the Prostate, Pancreas, Diaphragm and Spleen (continued). B. Merrill Ricketts.

32. **Empyema.**—The important points in the operative treatment of empyema are, according to Lenhart: 1. An early diagnosis and operate as soon as pus is discovered. 2. In operating be sure you open the pleural cavity in the most dependent part to secure good drainage.

### St. Louis Medical Review.

*May 30.*

35 Presentation Address to Dr. Young H. Bond. Robert C. Atkinson.
36 The Use of the Obstetric Forceps in Abbreviating the Second Stage of Labor. William H. Stauffer.

### Quarterly Journal of Inebriety, Hartford, Conn.

*April.*

37 *Alcohol in Surgery. Pearce Gould.
38 *The Value of Surgery in Certain Cases of Inebriety. H. A. Rodebaugh.
39 *On the Treatment of Dipsomania and Chronic Alcoholism by Hypnotic Suggestion. J. Milne Bramwell.
40 *Insanity from Hasheesh. John Warnock.
41 Inebriety in Ancient Egypt and Chaldea. T. D. Crothers.
42 *Static Electricity in the Treatment of Morphinism. A. J. Pressey.
43 Food and Poison. Max Kassowitz.
44 Alcoholism and Crime. P. M. Lightfoot.
45 Tobacco Poisoning. A. C. H. Friedmann.

37. **Alcohol in Surgery.**—Gould has studied the use of alcohol in surgery and has found it of very limited utility. It seems to impair convalescence and he would not place it among the means of primary value in the treatment of shock and collapse. It is injurious in cases of cancer, though there are special circumstances in which it may be used with good effect for securing sleep or promoting appetite. In conclusion, he remarks that it may not be the best treatment to absolutely withdraw alcohol from those that have been used to it as the breaking up of a life-long habit may in some instances be injurious.

38. **Surgery in Inebriety.**—The theory under which surgery may be advantageous in inebriety proposed by Rodebaugh is that certain conditions may interfere with what is called the nerve force and reduce the resistance, and he reports a case where operations for hemorrhoids which were a source of irritation leading to nervous waste, for phimosis and for deflected septum were efficient in combating the alcohol and morphin habits.

39. **Hypnotism in Alcoholism.**—Bramwell reports cases where hypnotism has been used in curing the alcoholic habit and dipsomania. The important points of treatment are that the patient must be willing to be cured, and must be susceptible to hypnosis, though deep hypnotism is not requisite for good results. In dipsomania the treatment ought to be begun at the quiescence of an attack and aim at retarding or weakening the next attack. When stimulants are taken continuously the patient should be encouraged to discontinue gradually or at once. The management of the patient before suggestion has taken effect is important. He should always be under the supervision of some trustworthy person who can advise and help him to overcome the temptations. Actual restraint is useless and the moral effect is always bad. The operator must be persevering and not easily discouraged; many persons relapse once or twice during treatment. The distaste for alcohol ought to be suggested as well as the abolition of the craving of it. The patient should look forward

with the idea that he can never be a moderate drinker, that his only alternative is total abstinence or the gutter. Even when the craving disappears quickly the hypnotism should be continued regularly for a month, and if the patient can be observed for six months so much the better. The object of treatment is not only to cure the disease, but to strengthen the will; if the patient can not control himself it is a failure. Bramwell thinks his results are encouraging, but he hopes for still more satisfactory ones.

40. **Hasheesh Insanity.**—The director of the Cairo asylum describes his experience with hasheesh insanity, which seems to be more frequent in that country than elsewhere. There is a close analogy between the condition of certain hasheesh habitués and dipsomania. He notes the following special points: 1. Suicidal intentions are common among alcoholics, rare among hasheesh cases. But we must bear in mind that most of the latter are Mohammedans, among whom suicide is rare. In Egypt hasheesh seems to be a more important factor in the production of insanity than alcohol is in England, and as a cause of crime of equal importance. The use of hasheesh, unlike that of alcohol, is not accompanied with any characteristic anatomic lesions and no physical disorders of note are met. The only exception to this is the staggering gait of hasheesh intoxication and delirium. In general only the physical disorders and lesions met with in idiopathic insanities are encountered.

42. This article appeared in THE JOURNAL, Jan. 10, 1903.

### Kansas City Medical Record.

*May.*

46 Inflammation of the Pelvic Organs Involving the Vermiform Appendix, with Report of Cases and Exhibition of Specimens. C. M. Fulton.
47 *The Operative Treatment of Hernia. Robert McE. Schauffler.

47. **Hernia.**—The operative treatment of hernia is reviewed by Schauffler, who insists on the importance of radical operation for cure. The mortality is slight and constantly being reduced, and unless there are objections on account of age, either too early or too advanced, or mechanical difficulties, as in very large hernia with danger of increasing intra-abdominal pressure by reduction and special idiosyncrasies to anesthetics, the results are fairly good. The operator should be thoroughly familiar with anatomy. Antisepsis should be rigid and the technic should be dry, with little handling and careful control of trifling hemorrhage. The Bassini operation is the best for inguinal hernia. He, however, calls attention to a few points. Whatever the skin incision, let the incision in the external oblique aponeurosis be a full finger's breadth from Poupart's ligament, so that it may be reflected in a lower as well as an upper flap. Have the suture material absorbable, kangaroo tendon, reindeer tendon or chromicized catgut. Suture the conjoined tendon, which is rather a muscle edge than a tendon, to Poupart's ligament with broad bites of muscle and shallow but firm ones in the ligament, taking care to retract well the lower external oblique flap which is continuous with Poupart's ligament. Do not tie too tight, lest the muscle atrophy. The cure depends on the firm union of the approximated parts, not on any permanent strength of the suture material. The crucial point in the suturing is to have the first suture, or the first two if one is placed above the cord, give snug approximation of the new internal ring to the cord without unduly constricting it. The aponeurosis of external oblique should be overlapped if possible, at least nicely approximated, without the sutures being very tight. This tissue is poorly nourished and easily sloughs. In femoral hernia the greatest difficulty is to distinguish the sac and true hernial contents from the tumor of true peritoneal fat which so often precedes or surrounds it. Never dissect a mass of fat blindly; it may have a little "glue finger" of intestine or bladder as its center. Almost any closure is successful in a femoral hernia, but the position of the femoral vein must always be kept in mind. In umbilical or ventral hernias in small patients, not very fat, the prognosis is good. With large or irreducible hernias in fat people with adhesions and attacks of inflammation or partial strangulation frequent it is much more serious. It is often wise, he says, to circumscribe the mass, including redundant skin, and come down on normal peritoneum just beyond the hernial opening and then reduce as much as possible, working from within, and resect the remainder of the omentum with part of the sac and skin in one mass. In the closure the peritoneum is stitched flat, as in laparotomy, and the abdominal wall closed in layers, taking special care to approximate the recti muscles. Small hernias in the linea alba or lateral walls are easily cured by such closure as is indicated by ordinary surgical common sense. Post-operative ventral hernias are treated along the same lines. In strangulated hernia the condition is more serious. Even apparently successful taxis is attended with considerable mortality. Recent statistics favor resection rather than colostomy. There are many cases of hernia imperfectly controlled by a truss or retained at the cost of much discomfort where operation would be better and the danger of taxis is a very serious one.

### University of Pennsylvania Medical Bulletin, Philadelphia.

*May.*

48 *Sensations Interpreted as Live Animals in the Stomach. Alfred Stengel.
49 Syphilis of the Lungs Simulating Pulmonary Tuberculosis. Alfred Stengel.
50 Methods of Clinical Examinations, Embodying the Practical Course Given to the Third Year Students of the University of Pennsylvania. C. Y. White.

48. **Live Animals in the Stomach.**—Stengel has investigated the alleged cases of this kind and reports one case where the belief of live animals in the stomach was maintained by the patient. He says, in view of these cases and others like them, he is convinced that the cases of supposed invasion of the stomach by various animals are often instances of gastric disease with misinterpreted sensations. These are not to be treated on the theory that they are pure delusions, as they are, in many cases at least, instances of organic gastric disease which may be relieved by appropriate treatment.

### Annals of Ophthalmology, St. Louis.

*April.*

51 *Report of Cases of Extensive Symblepharon and of Shrunken and Obliterated Cul-de-Sacs, Relieved by Skin Grafting, with Description of the Operation. H. W. Woodruff.
52 *Anomalous Direction of Retinal Vessels on Emerging from and Entering Optic Disc. E. F. Snydacker.
53 Report of a Case of Toxic Amblyopia from Coffee. P. B. Wing.
54 Cure of Pulsating Exophthalmos by Ligature of the Common Carotid Artery. H. V. Würdemann.
55 Four Eye Injuries with Introduction of Foreign Substances Not Suitable for Removal by Magnet. M. W. Zimmerman.
56 A Case of Acute Glaucoma, with Iritis, Following Cataract Extraction. James Bordley, Jr.

51. **Symblepharon.**—Woodruff's method of treating these cases is by skin grafts. He thoroughly cleanses all the parts and flushes the field with boric acid solution. If pseudopterygium is present, it is first dissected through, the lid thoroughly freed from its attachment to the eyeball and the cul-de-sac made large in all dimensions. Cicatricial bands should be removed entirely. Bleeding is checked by hot water. A plate is now cut from a sheet of block tin, which will snugly fit into the new-formed cul-de-sac. The corners are rounded off and the edges smoothed with the scissors or file. The plate may be cut out in the center to prevent rubbing on the cornea, if necessary. Four holes are made for the sutures, two at the outer and two at the inner angle of the plate, to correspond to the lid margin. A thin layer of skin is removed about one-third wider and more than three times as long as the plate. This is taken from the inner surface of the arm flattened by pressure. The plate and graft are then pushed into the cul-de-sac and sutured to the lid near its margin, tying the ends of the sutures over small rolls of gauze. The lids may be sewed together and dressed with gauze and bandaged in the usual way. The eyes should be bandaged as long as the plate is in place, and absolute quiet maintained. The plate is removed in four days and more freedom allowed the patient. Six cases are reported. He thinks the method is the best up to date. The white surface of the graft may be quite noticeable for awhile and objected to, but the graft can be placed at once where it is wanted, and is held down in the very bottom of the artificial cul-de-sac until it has adhered, and approximation and rest are secured by the plate.

52. **Anomalous Direction of the Retinal Vessels.**—This peculiar anomaly of the retinal vessels described by Snydacker

consists in the superior and inferior temporal veins and arteries, on emerging from the optic nerve, proceeding directly toward the nasal portion of the retina as if that were their destination; afterwards turning towards the temporal portion where they were distributed as usual. He thought this was but a coincidence with the defective sight in his first patient, but he shortly afterwards met with other cases showing the same peculiarities. There was also some congenital deficiency present besides the anomalous vessel exit, and there were also marked errors of refraction, most frequently myopic astigmatism. He finds very little mention in the literature of this condition.

### Ophthalmic Record, Chicago.

*May.*

57 Confessions of a Traveler. (Continued.) Albert B. Hale.
58 Paralysis of External Recti Muscles Appearing After a Blow on the Skull. Edward Lauder.
59 A Simple Test for Stereoscopic Vision. Frederick H. Verhoef.
60 *Conditions and Diseases of the Eye Which Make an Enucleation Necessary. A. J. Erwin.

60. **Enucleation of the Eye.**—The conditions requiring enucleation are enumerated by Erwin as follows: 1. A blind eye which menaces a sound one. 2. A nearly blind eye which has set up sympathetic disease should not be removed, and every operator should keep this distinction in mind. 3. Every lacerated eye with a ragged wound in the ciliary region should be removed before it has time to set up sympathetic disease, and also 4, every eye which contains a growing tumor before it involves the orbital tissue. Lastly, he says, eviscerate early in panophthalmitis. These indications are discussed in detail. The second rule is important, that a diseased eye with some sight which has already set up sympathetic disease in the other eye will not save the other eye by its removal, and it is worth while to save what sight it has. Not every ciliary laceration warrants enucleation. A clean rent that has healed promptly without contraction is fairly safe so long as it remains free from irritation, but ragged laceration calls for enucleation before it has had time to cause disease of the other eye. As regards the operation, he thinks a careful study of the conditions present in each case is required. With threatenel sympathetic disease of the other eye, simple enucleation where applicable would be judicious; also, in panophthalmitis simple evisceration would be best and easiest, and enucleation, not evisceration, should be done in all cases of interocular tumor, as they usually involve the sclera. Evisceration should always have preference where there are adhesions of the sclera or capsule unless contraindicated. He reiterates that where there seems to be an immediate danger of sympathetic ophthalmitis simple enucleation or evisceration should be done, but the demand for the best cosmetic effect now requires in all other cases the Lang or Mules operation where possible. The technic of the two operations is described.

### The Laryngoscope, St. Louis.

*May.*

61 *Remarks on the Etiology of Hypertrophic Rhinitis. E. L. Shurly.
62 *Rhinoplasty by a New Operation. O. B. Douglas.
63 *Malignant Tumors of the Nasopharynx. Francis J. Quinlan.
64 *Middle Ear Diseases in Tuberculosis. Robert Levy.
65 *The Report of a Case of Pin in the Larynx and Its Removal by an Original Method. Otto J. Stein.
66 Report of Two Cases of Laryngeal Paralysis Due to Aortic Aneurism. Hal Foster.
67 Superheated Medicated Air in Diseases of the Ear and Nose. Joseph C. Beck.

61. **Hypertrophic Rhinitis.**—Shurly discusses the etiology of this condition, which he largely attributes to defects of development owing to evolution of the nasal region in the higher races. The upper nasal passages of the Caucasian are only abnormally normal, and this lack of proper structure tends to the production of the condition. Other causes that may occasion it are attacks of measles, diphtheria, scarlet fever, etc., which every child must go through, and still another cause is the artificial mode of living, especially of the well-to-do class. Lastly, he believes that a new etiologic factor will arise in the prevalent consumption of fake foods and nostrums, and consequent abuse of the metabolic functions.

62. **Rhinoplasty.**—The new operation described by Douglas was devised in a case of depressed fracture of the bones, where he found he could not raise them from below, and in which he made an open mask for the face with a sort of bridge running down the course of the nose. Working from within he supported the adhesions and sutured the bones with sutures which were passed out through a common opening in the bridge of the nose and fastened to the bridge of the mask, thus supporting the outlines of the nose in a normal position. The result was good.

63. **Malignant Tumor of the Nasopharynx.**—Quinlan reviews the literature of these growths and finds that there is sufficient evidence to show that aside from the pseudo-malignancy of certain rapidly growing fibromata there is the possibility of true sarcoma and no reason, a priori, to exclude carcinoma from this region. The type usually described corresponds to adenocarcinoma. As regards treatment, he does not give a hopeful opinion. The prognosis of malignant growth in the nasopharynx is very unfavorable. The character of the tissues favors rapid malignancy, and the results have only been very slightly modified for the better. This is largely due, however, to the fact that the condition is not recognized early enough. When patients are in middle life and when symptoms are suspicious, careful examination should be made. Every day of delay makes the prognosis worse and temporizing measures are almost criminal.

64. **Middle-Ear Disease in Tuberculosis.**—Levy concludes his paper with the following summary:

1. Any of the usual aural affections may affect the tuberculous as well as the non-tuberculous. 2. The usual modification of an acute otitis in a tubercular subject is manifested in the course the disease pursues. 3. It is a doubtful question whether the *Bacillus tuberculosis* is present as a distinctly etiologic factor or as an accident. 4. Comparatively few cases of tuberculosis in children and relatively few instances of bone tuberculosis are met with in Colorado. 5. Clinical tuberculous otitis occurs with moderate frequency in Colorado, being secondary to lesions of the respiratory organs. 6. Tuberculous otitis may develop when the general symptoms of tuberculosis have been arrested and the patient's condition is unusually good. 7. Tubercle bacilli may find their way into the middle ear through the Eustachian tube, through the lymph channels of the blood currents. 8. Unusual care must be exercised in the application of the nasal douche in tuberculous patients. 9. The discharge may be arrested, but not permanently, as a rule. 10. It must be exceedingly rare for miliary tuberculosis to develop from an otitis as the focus of infection. 11. Through and through irrigation with tubercle-bacilli destroying agents is of prime importance in the treatment. 12. General and climatic treatment must be conscientiously carried out.

65. **Pin in the Larynx.**—In the case reported a pin was firmly fixed across the larynx and could not be removed by forceps without too extensive laceration of the tissue. Several methods were suggested, but the plan finally adopted was to seize the pin at the center with a hook, then by pressing it double it up. A canula, bent at the proper angle to enter the larynx, was very firmly fixed at right angles to a heavy handle, carrying a lever, to whose upper end was fastened the stiff steel wire that passed through the canula. This wire terminated in a hook at its distal end. The hook at the end of the canula was easily carried around the exposed part of the pin and continuing to hold the instrument in the same position pressure was made on the lever of the handle and the pin bent back and jack-knifed itself so that it was drawn out of the tissue and up into the canula, without the patient knowing anything had been done. The recovery was complete and rapid.

### Texas Medical Journal, Austin.

*May.*

68 *The Rational Treatment of Snake Bites and Others with Adrenalin Chlorid. R. Menger.

68. **Snake Bite.**—Menger suggests the use of adrenalin in snake bite on account of its effect as a heart stimulant. He has had no experience with it, however, but simply offers it as a proposition.

### Detroit Medical Journal.

*May.*

69 *On the Blood Pressure in Surgery. George W. Crile.
70 Some Points in the Diagnosis and Treatment of Diseases of the Nose and Throat, and Their Relation to General Medicine. Willis S. Anderson.
71 Acute Dilatation of the Stomach. W. M. Harvey.

69. **Blood Pressure in Surgery.**—The following is a summary of the results of Crile's study of the blood pressure in shock:

Surgical shock is an exhaustion of the vasomotor center. Neither the heart muscle, nor the cardio-inhibitory center, nor the cardio-accelerator center, nor the respiratory center are other than second-

arily involved. Collapse is due to a suspension of the function of the cardiac or of the vasomotor mechanism. In shock, therapeutic doses of strychnin are inert, physiologic doses dangerous or fatal. If not fatal, increased exhaustion follows. There is no practical distinction to be made between external stimulation of this center, as in injuries and operation, and internal stimulation by vasomotor stimulants, as by strychnin. Each in sufficient amount produces shock, and each, with equal logic, might be used to treat the shock produced by the other. Stimulants of the vasomotor center are contraindicated. Cardiac stimulants have but a slight range of possible usefulness, and may be injurious. In collapse, stimulants may be useful because the centers are not exhausted. Saline infusion in shock has a limited field of usefulness. In collapse it may be effective. The blood tolerates but a limited dilution with saline solution. Elimination takes place through the channels of absorption. Its accumulation in the splanchnic area may be sufficient to fix the diaphragm and the movable ribs, causing death by respiratory failure. Saline infusion, in shock, raises, but can not sustain the blood pressure. Adrenalin acts on the heart and blood vessels. It raises the blood pressure in the normal animal; in every degree of shock; when the medulla is cocainized, and in the decapitated animal. It is rapidly oxidized by the solid tissue and by the blood. Its effects are fleeting; it should be given continuously. By this means the circulation of the decapitated dog was maintained ten and one-half hours. In excessive dosage there is a marked stimulation of the vagal mechanism. The pneumatic rubber suit provides an artificial peripheral resistance without injurious side effects, and gives a control over the blood pressure within a range of from 25 to 60 mm. mercury. Physiologic rest, posture, heat, artificial peripheral resistance, guarded use of adrenalin and, particularly when there has been considerable hemorrhage, normal saline solutions are the most reliable means of combating shock—but prevention is the best cure. By combined use of artificial respiration, rhythmic pressure on the thorax, and adrenalin injected into the jugular vein, animals which were apparently dead as long as fifteen minutes were resuscitated. The control of the blood pressure is almost equal to the control of life itself.

His paper concludes with a study of the different conditions for blood pressure determination after various operations.

### Dominion Medical Monthly, Toronto.

*May.*

72 The Economic Aspect of the Tuberculosis Problem in Canada. A. J. Richer.
73 *The Administration of Hyoscin Hydrobromate Before Ether Anesthesia. E. A. Robertson.
74 Hemiplegia Complicating Pregnancy. Report of a Case. Lewis H. Marks.
75 Oxyuris Vermicularis in the Appendix. Ernest A. Hall.

73. **Hyoscin Hydrobromate Ether Anesthesia.**—Robertson recommends the use of 1/100 of a grain of hyoscin hydrobromate one-half hour before the administration of ether. The patient is calm and dozes off with quiet respiration, the mouth dry, takes ether without struggling and the stage of surgical anesthesia is quickly reached. There is little or no secretion of fluid from the mouth or respiratory tract, no muscular rigidity or cyanosis and a very small quantity of ether is required. There is no vomiting or obstruction to the respiration by secretion of fluid in the air passages. The patient regains consciousness rapidly, but is quiet and sleepy for the first twelve hours after the operation. There is some dryness of the mouth and thirst. He has never seen any dangerous symptoms follow the use of the drug and he thinks that it prevents or lessens many of the disagreeable or dangerous effects of ether.

### Northwestern Lancet, Minneapolis.

*May 15.*

76 Pathologic Laws. H. D. Valin.
77 Bursitis Subdeltoidea Acuta. E. Klaveness.
78 Reflex Cough Due to Irritation in the Upper Respiratory Tract. William R. Murray.
79 The Hygiene and Treatment of the Voice. J. G. Parsons.

### Virginia Medical Semi-Monthly, Richmond.

*May 22.*

80 The Tuberculin Test in the Diagnosis of Tuberculosis in Man. Boyd Cornick.
81 Some Suggestions of Interest to Physicians on the Scientific Aspect of the Race Question, with Particular Reference to the White and Negro Races. James Orr.

### Medical Fortnightly, St. Louis.

*May 25.*

82 Some Points in Regard to Formaldehyd Disinfection. R. B. H. Gradwohl.
83 Hydrotherapy. T. A. Wakely.
84 Mastoid Disease. C. A. Boice.
85 Surgery of the Diaphragm. B. Merrill Ricketts.
86 Painful Menstruation. W. L. Downing.

### Canadian Journal of Medicine and Surgery, Toronto.

*June.*

87 Intestinal Obstruction Produced by Bands of Adhesions. J. F. W. Ross.
88 Erythema Circinatum—Acne Varioliformis. Alexander McPhedran.
89 Phenic Acid in Pyogenic Processes. Thomas H. Manley.

### Columbus Medical Journal.

*May.*

90 Preventive Medicine. Edmund C. Brush.
91 Adrenal Extract in Urethral Hemorrhage. M. L. Heidingsfeld.
92 Some Surgical Complications and Sequelæ of Typhoid Fever. William J. Means.

### Toledo Medical and Surgical Reporter.

*June.*

93 Diagnosis of Kidney and Bladder Disease, Especially with the Cystoscope. Charles M. Harpster.
94 The Benefits of the X-Ray and Static Currents. John Gardner.

### St. Paul Medical Journal.

*June.*

95 Medical Progress of the Past and the Demands of the Future on Our Profession. J. L. Rothrock.
96 Gallstone Disease: Its Causation and Diagnosis. William E. Ground.
97 Medical Associations. Franklin Staples.
98 Gastrostomy; Stab Wound of the Thorax. Frederic T. Dennis.
99 The Significance of Pain, Especially within the Abdominal Cavity. C. P. Thomas.
100 Brain Tumor Giving Rise to Internal Hydrocephalus, but with the Clinical Aspects of a Simple Melancholia. Arthur W. Dunning and H. C. Arey.
101 A Simple Method of Tying a Ligature Which Is to Be Removed Later. Arnold Schwyzer.

### Journal of Medicine and Science, Portland, Me.

*May.*

102 New Views on the Constitution of Matter. F. C. Robinson.
103 Brief Sketch of the Lives and Works of a Few Eminent Scientists of Modern Times. Franklin Staples.

### Clinical Review, Chicago.

*June.*

104 Typhoid Fever in Infancy and Childhood. A. C. Cotton.
105 Lectures on Gynecology. Franklin H. Martin.
106 Melancholia; Paretic Dementia; Two Cases of Organic Dementia. Daniel R. Brower.
107 Clinical Lectures on the Etiology, Pathology, Diagnosis and Treatment of Tumors. A. H. Levings.

### Indiana Medical Journal, Indianapolis.

*June.*

108 Oration on State Medicine, American Medical Association. William H. Welch.
109 Report of an Ectopic Gestation in the Fifth Month, with Unusual Features; Operation and Recovery. O. G. Pfaff.
110 Local Iodoform Dermatitis, with Report of a Case. Alois B. Graham.
111 Impressions of Lorenz; a Day with the Austrian Surgeon on the Tchefuncta River. Joseph Rilus Eastman.
112 Voluntary Production of Cutis-Anserina and Erection of the Hairs of the Body. O. W. McQuown.

### Canadian Practitioner and Review, Toronto.

*May.*

113 Food in Health and Disease. Adam H. Wright.
114 The Indian and the Indian Medicine Man. J. F. W. Ross.

### Mississippi Medical Record, Vicksburg.

*June.*

115 Chronic Rheumatism and Neuritis. James J. Walsh.

### Pacific Medical Journal, San Francisco.

*May.*

116 The Use of Acids in Gastric Disease. Alfred W. Perry.
117 Gastrectomy. Winslow Anderson.

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## FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### British Medical Journal, London.

*May 23.*

1 *The Influence of Wind on Phthisis. W. Gordon.
2 Case of Pyopericarditis; Pyopneumo-pericardium; Pneumococcus Pyemia. W. K. Sibley, W. Arbuthnot Lane and George Rowell.
3 Case of Infective Endocarditis Successfully Treated by Rectal Injections of Antistreptococcus Serum. Dyce Duckworth.
4 *Traumatism as a Factor in the Etiology of Pulmonary Tuberculosis. James Weir.
5 *The So-called Anthracosis and Phthisis in Coal Miners. R. S. Trotter.
6 *The "Physiologic" Difference Between the Two Sides of the Chest. J. Edward Squire.
7 Consumption in the Navy. W. E. Home.
8 Observations on Empyemata in Children. P. Stanley Blaker.
9 Six Cases of Empyema. Oswald F. Rowley.

1. **The Influence of Wind on Phthisis.**—Among the various climatologic elements that effect the progress of phthisis, wind seems to be considered as uncertain. Gordon reviews the opinions of various authors and analyzes the statistics of certain Devonshire parishes which are more or less exposed to the wind, especially the southwest winds and ocean

winds. He finds from a careful study of the subject that the direction of the wind exerts a very positive influence on consumption mortality and that these regions exposed to strong, damp winds have the highest ratio of mortality of consumption. He sums up his conclusions in the following:

1. West and southwest winds in Devonshire have a marked influence on phthisis, raising the phthisis death rate among populations exposed to them, and injuring those who have already developed the disease. 2. This bad influence is probably due to the fact that west and southwest winds are the prevalent strong wet winds of the country. 3. It is reasonable to believe that strong, wet winds anywhere may produce similar effects. 4. The bad effects may be possibly explained by the chilling and depressing nature of the winds, and by their tendency to excite bronchial catarrh in those exposed to them.

4. **Traumatism and Tuberculosis.**—Weir reports a case of tuberculosis occurring in a man in the prime of life and in ordinary health, following an injury to the chest. The family history was tuberculous, but the patient had always been well excepting for pneumonia twenty years before. One sister died of phthisis, said to be due to injury to the chest. In his own case there was a clear sequence of injury with apparently succeeding pleurisy followed by pulmonary symptoms, the presence of tubercle bacilli, etc. The patient recovered under pulmonary gymnastic treatment together with the usual medical aids. Weir remarks on the importance of traumatism, suggesting that in our ordinary estimation of the significance of pleurisy we may have the cart before the horse, and pleurisy may not be due to consumption, but consumption to pleurisy, causing adhesions and making a point of lessened resistance for the attack of the tubercle bacillus.

5. **Anthracosis.**—Phthisis was formerly considered to be a regular occupation disease of coal miners, but owing to sanitary improvements in late years this is less the case. While all miners will show a blackening of the lungs, this is by no means an indication of disease. The really formidable dust particles are not those from coal or soot, but the particles from the sandstone strata or dust from other rocks, etc., associated with the coal. The average life of the horse or pony in the pit is fully up to the average standard, and he believes that there may be some protective influence in the coal dust or coal carbon particles inhaled by the miners. He says that in fact the average coal miner often works in a mine under more healthy conditions than those under which he lives at home. He mentions the following facts as worthy of note:

1. Coal dust may remain imbedded under the skin for years without producing any irritation whatever. 2. The death returns from phthisis in a colliery district show a greater proportion of deaths among females than among males. 3. Colliery surgeons almost invariably state that phthisis is not so common in mining as in other districts where they have been in practice. 4. In the majority of phthisis cases which do occur there is a strong family history of phthisis on one or both sides. 5. Phthisis often seems to attack successive families in particular houses.

6. **Physiologic Differences Between the Two Sides of the Chest.**—Squire has investigated 58 persons, 28 males and 30 females, as to the physical signs on the two sides of the chest, all young adults and in general good health. Only in a very few were there signs of disease, and of which the subjects themselves were hardly aware. The general results are summarized by him in the following conclusions:

1. In the majority of healthy persons, but not in all, the physical signs elicited over the upper part of the right lung differ somewhat from those on the corresponding part of the left side.

2. These differences consist in the following: (*a*) The percussion note is slightly less resonant and higher pitched on the right side; (*b*) the breath sounds are louder on the right side, and the expiratory portion of the sound more marked; the character of the sound and the proportion between the length of the inspiratory and expiratory sounds is not modified in health; (*c*) the vocal resonance, especially in men, is more marked on the right side; (*d*) vocal fremitus is more marked on the right side.

3. Of these differences the increase in the vocal fremitus is by far the most constant. Differences in the percussion note are only noted in half the cases examined.

4. The differences, except in percussion, are not so much alterations in the character of the signs as modifications in transmission of the sounds.

5. The modification in the signs are apparently due to the direction and form of the main bronchus, which are not the same in the two lungs. The percussion note modification may possibly be influenced by the thicker covering of the right side of the chest, but is most probably also dependent on the position and size of the bronchus.

### The Lancet, London.

*May 23.*

10 *Some Reflections, Mainly Ethical, on the Present Position of Operations in the Practice of Surgery. William H. Bennett.
11 *The Tongue in Disease. W. Howship Dickinson.
12 *The Disposal of the Wounded in Naval Warfare. Philip S. Randall.
13 *The Surgical Treatment of Pulmonary Hydatids. John O'Conor.
14 A Case of General Infection by a Nematode, Accompanied by Hypertrophic Gingivitis. J. Dencer Whittles.
15 Full-time Extra-uterine Pregnancy; Fetus Lodged in a Capsule of the Ovary in a Peritoneal Sac Resembling that of the Tunica Vaginalis. James Oliver.
16 *Note on the Etiology of the Sleeping Sickness. Annibal Bettencourt, Ayres Kopke, José Gomes de Rezende, Jr., and Annibal Correia Mendes.
17 On a Case of Arterial Occlusion and Gangrene. Andrew Dunlop.
18 *A Further Note on the Therapeutics of a 10 Per Cent. Solution of Sodium Cinnamate in Glycerin Injected Subcutaneously. Lovell Drage.
19 Researches on Hibbertia Volubilis. John Reid.

10. **Operative Surgery.**—Bennett reviews the record of surgery, which he thinks passes through certain stages with the surgeon: 1. The period of extra-confidence in operative work; 2, a feeling of less aggressiveness; 3, a tendency to confine one's work to certain operations with which the surgeon is most familiar and his practice becomes more eclectic; 4, in fortunate cases the period when operations may be things of the past. He deprecates too much following of operative ideals. In many cases the necessity of complete operation may be wanting. Rules of routine procedure are objected to. The mere safety of the operation sometimes tends to obscure the fact that its results are not altogether advantageous. While the use of exploratory operation has been on the whole advantageous, he thinks there are still some possibilities of its being overdone. He remarks on the position of the surgeon toward the public; the difficulty sometimes of the patients or their friends persisting in demands for operation, and considers the responsibility of surgeons in these cases. He believes in the future that the operative surgeon as we now know him will be a less imposing figure in the medical landscape than he is now, and operations, except in a restricted degree, which he advocates, will be looked on with as little favor as suppuration is regarded at the present time.

11. **The Tongue in Disease.**—Dickinson reviews the various conditions of the tongue in disease, especially those that may be symptomatic. The first stage of disease is what he calls the dotted or stippled tongue, characterized by a trifling excess of epithelium on the papillæ. It may not necessarily mean ill health, it may be an individual peculiarity. It is not usually accompanied with pyrexia. The coated or loaded tongue comes next. This is an exaggeration of the former state, a superabundance of epithelium, by putting too much on or taking too little off. Some degree of febrile action is usually present. The average temperature in his study of 49 cases was 99.1. The method of taking food is often concerned in the production of this type of tongue, but it occurs in a great variety of cases where the patient is out of sorts, though not really ill. Whatever raises the temperature, impairs the appetite and restricts the salivary flow gives rise to this state of affairs. When the coated tongue is dry the indication is more grave. Two varieties are mentioned: the strawberry tongue and the plastered tongue, which is simply the ordinary coated tongue, only more so. A first glance of this gives the alarm of either pneumonia or typhoid fever in the first place, then of acute bronchitis or acute rheumatism. Other acute disorders may be indicated, though less prominently. The average temperature in the 29 cases presenting this tongue was found to be 101.6. This is the most definite in its indications of all the tongues of which we know. Next he mentions the furred or shaggy tongue, which is more characteristic of chronic than of acute cases. Except with the diet this tongue has no special association, though some degree of pyrexia is usually present. He has noticed it in pneumonia, typhoid and acute rheumatism, which generally means a long illness of such a sort as to restrain saliva and inhibit solid food. Succeeding the plastered and furred tongue comes the incrusted, brown and dry tongue with the elongated papillæ separated and caked over with a brittle crust, cracked and fissured, which largely consists of vegetable organisms. It indicates a long exemption from wear and wash, or the absence of mastication, production of saliva, and generally, though not neces-

sarily, of high temperature. This is the tongue of the typhoid state, though not limited to typhoid fever. It is of grave prognosis and calls for liquid nourishment and stimulants. Next he speaks of the denuded tongue, red, smooth and dry, which is usually associated with pyrexia and deficiency of saliva. It represents a later phase of disease than the coated or encrusted, for it often succeeds them. Exhaustion by discharge evidently plays a large part in the impairment of nutrition which this tongue represents. Pyrexia is not so high. The diseases with which it is associated are mostly subacute and the fevers are often hectic. Its clinical significance is prostration of some standing, often connected with material exhaustion and apt to be attended with febrile action of the hectic type. Physiologically the essential factor is failure in the growth of the lingual epithelium due to a concurrence of causes.

12. **Disposal of the Wounded in Naval Warfare.**—See "London Letter" in news department, this issue.

13. **Pulmonary Hydatids.**—O'Conor thinks that Argentina is probably only second to Australia in its frequency of hydatid disease. He has operated on 84 cases in the last 8 years, 3 of which were pulmonary, and discusses the diagnosis, localization, treatment, etc., of these cases. The diagnosis may be difficult before rupture of the cyst occurs. He does not like exploratory operations on the chest, and recommends the exploratory needle and syringe as a diagnostic agent to locate the cyst and to find its nearest point to the surface. He does this under anesthesia. His operation is described. He makes a four-inch cut parallel to the corresponding ribs which are incised, the pleura opening and the presenting lung secured by bullet forceps and drawn into the wound, the exploring needle again inserted and left *in situ* to act as a guide for the knife. The intervening tissue is excised and the cut edges seized and diverted. As the fluid escapes the needle is withdrawn and the index finger introduced along the blade of the knife into the cyst. The latter is then withdrawn and two sharp hooks inserted alongside the finger and the cyst walls secured and drawn outwards. With a large, full-curved needle half a dozen silkworm-gut sutures are applied so as to include the cut edges of the fibrocyst with some pulmonary tissue and passed outward through the intercostal muscles and the skin, and just as they are being tied the assistant removes the bullet forceps so that the extruding portion of the lung may recede. The endocyst is removed by gentle application of a long forceps, a large rubber drain inserted and iodoform gauze applied to the wound. The after-treatment is tedious. There is a tendency to the formation of a flask-shaped cavity by closure of the external wound before the cavity of the lung is obliterated. He does not believe in removal of the contents and closure of the external wound without drainage. Four cases are reported.

16. **Sleeping Sickness.**—The members of the Portuguese commission argue for their priority in the discovery of the bacterium of this disease and the identity of that described by Castellani with their own.

18. **Sodium Cinnamate.**—Drage has used sodium cinnamate in tuberculosis with success and reports a case. His experience has led him to believe that in early cases of pulmonary tuberculosis a successful issue may be predicted with confidence, and that in all more advanced cases amelioration may be guaranteed with equal confidence by this treatment. He employs a 10 per cent. solution of cinnamate of soda in glycerin, subcutaneously, 30 minims at a time. The glycerin is injected into the flank as a rule. He has also employed it in cancer with good results.

### Journal of Tropical Medicine, London.

*May 15.*

20 Notes on the Insanitary Condition of the Standerton, Transvaal. Myer Coplans.
21 Case of Peripheral Neuritis, Probably Rice-Produced, Simulating Beri-beri, from Omdurman, Soudan. J. B. Christopherson.
22 Tropical Hygiene. W. J. Simpson. (To be continued.)

### Intercolonial Medical Journal of Australasia, Melbourne.

*April 20.*

23 Observations on Pathology and Surgery of Retro-displacements of the Uterus. G. Rothwell Adam.

### Archiv f. Gynaekologie, Berlin.

*Last indexed page 274.*

24 (LXVIII, 1.) Beitrag zur geburtshülflichen, gynäkologischen und entwicklungsgeschichtlichen Bedeutung des Anus anomalous vulvovaginalis. H. von Bardeleben (Berlin).
25 *Tubal Nidation. Kroemer (Giessen).—Untersuchungen über die tubare Eieinbettung.
26 Mutual Relations Between Parametritic Exudate and Pregnancy, etc. L. Blumreich (Berlin).—Ueber die Wechselbeziehungen zwischen parametritischem Exsudat und Schwangerschaft, Geburt und Wochenbett.
27 *Etiology of Birth Paralysis. J. Eversmann (Bonn).—Beitrag zur Frage der Aetiologie der Entbindungslähmungen der oberen Extremität.
28 *Vaginal Laceration During Labor. M. Kaufman (Lodz).—Zur Lehre von den Zerreissungen des Scheidengewölbes während der Geburt.
29 Zur Eklampsie-Frage. L. Knapp (Prague).
30 (No. 2.) Ueber einen durch ungewöhnlichen Sitz ausgezeichneten Ovarialtumor. A. Bluhm (Berlin).
31 Ein Beitrag zur Kenntniss des Sarcoma botryoides mucosæ cervicis infantum. Ibid.
32 *Ueber die Breus'sche Hämatommole. F. Taussig (St. Louis).
33 Case of Hemignathia. O. Bürger (Vienna).—Ueber einen Fall seltener Missbildungen.
34 *Resistance to Infection and Intoxication During Pregnancy. Bossi (Genoa).—Ueber die Widerstandskraft von Thieren während der Schwangerschaft und im Puerperium gegen Infection und Intoxication.
35 *Recovery After Multiple Perforations from Sponge left in Abdomen; Technic, etc. Kayser (Berlin).—Ein durch dreifache Darmresection geheilter Fall mehrfacher Darmperforation im Anschluss an das Zurücklassen einer Compresse in der Bauchhöhle nebst Bemerkungen zur Technik der Darmresection.
36 *Die Nuclein-Kochsalzbehandlung der puerperalen Sepsis im Lichte moderner Forschung. J. Hofbauer (Vienna).
37 *Instrumental Dilation. A. Dührssen (Berlin).—Ist die Bossi'sche Methode wirklich als ein Fortschritt in der operativen Geburtshülfe zu bezeichnen?
38 *Ein weiterer Fall von Tuberculose der Placenta. E. Runge (Berlin).
39 Study of Disinfection of Hands; Rubber Gloves in Obstetrical Training. H. Schumacher (Strassburg).—Bacteriologisch-klinische Studien zur Frage der Hände disinfection und der Bedeutung der Gummihandschuhe für den geburtshülflichen Unterricht.
40 *Die Function der Corpus luteum. L. Fraenkel.
41 (No. 3.) *Intrauterine Rigor Mortis. B. Wolff (Berlin).—Ueber intrauterine Leichenstarre.
42 Ueber einen in pathologisch-anatomischer und klinischer Hinsicht bemerkenswerthen Fall eines Dickdarmcarcinoms mit Ovarialmetastasen und ausgedehnter carcinomatöser Erkrankung der Haut (Cancer en cuirasse). Kayser (Berlin).
43 *Influence of Pregnancy, etc., on Muscular Powers. Bossi (Genoa).—Einfluss der Menstruation, der Schwangerschaft, der Geburt und des Puerperalstadiums auf die Muskelkraft.
44 *Zur Bildung der Capsularis bei der Tubarschwangerschaft. Voigt (Dresden).
45 Zwei Fälle Thoracopagus tetrabrachius. K. Kamann (Munich).
46 *Ueber zwei Fälle von Sectio cesarea wegen Eklampsie. E. Streckeisen (Münstertingen).
47 Zur Kasuistik und Statistik der Lithopädions. Extrauteringravidität. Ausgetragene Frucht, 4 Jahre retinirt. Lithokelyphos per koeliotomiam entfernt. M. Strauss (Kronach).
48 *Tuberculosis of Ovarian Tumor. F. Prüsmann (Kiel).—Zur Tuberculose der Eierstocksgeschwulste.
49 Die Aetiologie der congenitalen Zwerchfellhernien (hernia of diaphragm). W. Liepmann (Halle).
50 Zu der Mittheilung von A. Dührssen: "Ist die Bossi'sche Methode wirklich als ein Fortschritt in der operativen Geburtshülfe zu bezeichnen?" Bossi. (Reply to No. 37 above.)

25. **Tubal Nidation.**—Kroemer states that the egg is embedded in the tube in exactly the same manner as in the uterus. It sinks through the softened mucous membrane of the tube into the fibro-muscular membranes and is completely encapsulated. Ordinarily the mucous membrane at this point rises and forms the capsule. Then the egg grows either into the lining of the tube or it separates the lining and the mucous membrane and presses the tube to the opposite side, and so lies within the muscular layer. In this case the tube is found as a small slit at the periphery of the egg. Sometimes the growth of the tube will cause a disturbance of the placenta and a hemorrhage follows which dissects the mucous membrane free from the muscular layer, and it is found as a string running through the extravasated blood. He believes that muscular contraction of the tube causes hemorrhage leading to abortion and in such cases fragments of villi may be left behind and form new growths. This fact is a point in favor of operative interference in every case of tubal pregnancy.

27. **Etiology of Birth Paralyses of the Upper Extremity.**—Eversmann cites a case of version, after which the child had paralysis of the muscles supplied by branches of the fifth and sixth cervical nerves. Suspecting a fracture, but unable to

demonstrate it, a radiograph was taken which showed a green stick fracture of the opposite or right clavicle, but no left-sided bony lesion. The child died suddenly at 2½ months without much change of condition, and the postmortem showed the healed fracture of right clavicle and a rupture of branches of the fifth and sixth left cervical nerves.

28. **Tears of the Vaginal Vault During Labor.**—Kaufmann reports 80 cases from the literature, including his own, and gives careful analysis of these. The tear is most frequently located posteriorly; its extension on the uterus complicates prognosis and treatment. The laceration is usually spontaneous, and most patients were multiparæ; in a few cases the children were oversized. In 68 cases the peritoneum was torn open; in 7 cases no report; in 5 cases uninjured. As to treatment during delivery, 20 abdominal and 2 vaginal hysterectomies were performed, and 6 laparotomies for repair of tear to peritoneum, while 9 were repaired per vaginam; 19 cases drained and tamponed; 7 were aseptic. Death occurred in 28 cases, 10 from hemorrhage and 18 from sepsis. In 40 cases of uncomplicated rupture of vaginal vault, there were 10 deaths, 2 from hemorrhage. The author shows by cited cases how almost any obstetrical operation may tear or perforate the vaginal vault or cervix. Etiologic factors are traumatism from different operations, histologic changes in the musculature and faulty mechanism or spontaneous rupture. About 40 per cent. of such tears occur in cases of transverse position of fetus. When rupture has taken place often no severe symptoms appear and the condition is found accidentally when examination is made or manual delivery of placenta attempted. Diagnosis depends on gradual cessation of pains, moderate hemorrhage and possible prolapse of intestine, confirmed by digital examination. In this condition such severe pains and collapse as in rupture of the uterus are not found. The prognosis is better than in the latter. The mortality is only 25 per cent., as contrasted with 65 per cent. in rupture of uterus. The prognosis as to the child is unfavorable. The author recommends delivery through the opening in the vaginal vault, since it does not decrease in size as does the wound in a ruptured uterus. Laparotomy is indicated only when hemorrhage is not easily controlled from below. Hysterectomy is indicated only when the uterine tear is extensive and its margins ragged and contused. The vaginal tear should be closed with suture and the drain and tampon used as needed.

32. **The Blood Mole of Breus.**—Taussig reports from Wertheim's clinic in Vienna 8 new cases of blood mole, first described by Breus in 1892. He discusses their pathology and clinical symptoms and reaches the following conclusions: 1. These moles can be divided into two classes, namely: (a), those with a pedicle where the placenta was not distinguishable, and (b) those with a broad base where the placenta was already differentiated. 2. Absence of vessels in the chorion and of the heart is not characteristic of this kind of a mole, for chorion vessels and rudiments of a heart are sometimes found. 3. The decidua is sometimes preserved; hence the cause of the malformation can not be changes in the decidua. 4. The syncytium grows after the death of the fetus, but not the Langhans' layer. 5. Amnion epithelium can also grow after death of the fruit. 6. A post-mortal growth of chorionic villi was not proven. 7. The embryo shows certain malformations, but none that can be regarded as the cause of its death. It is generally shriveled. 8. The formation of the blood mole occurs in the following way: After the death of the fetus the membranes grow and the liquor amnii increases in amount so that a secondary hydramnion occurs. Later, from unknown causes, this post-mortal growth ceases. The egg is retained and the amniotic fluid is gradually reabsorbed. The membranes become folded together, partially filled with blood, and finally a sessile or a pedicled hematoma is formed.

34. **Immunity of Animals During Pregnancy and the Puerperium in Respect to Infection and Intoxication.**—All agree that various factors like cold, loss of blood, etc., increase the susceptibility to infection. In order to determine whether pregnancy is also such a factor Bossi has experimented on 79 rabbits and guinea-pigs, some pregnant and some non-pregnant, injecting under the skin or into the veins cultures of the bacilli coli, diphtheriæ, tuberculosis, etc., as well as streptococci and staphylococci. His conclusions from these observations, which he regards as only preliminary, are as follows:

1. After infection with mixed cultures of streptococci and staphylococci or streptococci and diphtheria bacilli the number of acute infections was much greater with pregnant than with non-pregnant animals. Also the number of deaths was much greater with pregnant animals when equal amounts of the pathologic germs were injected under similar conditions. 2. The further advanced the pregnancy, the greater were the effects of the injection. 3. The temperature was higher after experimental infection in pregnant animals than in the control animals. 4. Abortion was common after experimental infection. Opposite results were obtained after experimental infection with *Bacilli diphtheriæ*; the pregnant animals possessed the greater immunity. 5. Frequently pathogenic bacteria were found in the placenta and less often in the fetal blood. 6. Diphtheria toxin had less effect on pregnant animals. 7. Puerperal animals showed no great susceptibility to experimental infection. 8. Injected micro-organisms were found in the milk secretion.

The important clinical conclusion is drawn that artificial interruption of pregnancy is indicated in cases of infectious disease like tuberculosis.

35. **Intestinal Resection for Multiple Perforation.**—Kayser reports a case of multiple perforation following the leaving of a sponge in the abdominal cavity, and cites many others, including experiments on animals. The symptoms usually are: Severe abdominal pains, peritonitis, sometimes chills, vomiting and constipation. He concludes that unless the sponge is soon removed it will initiate a fatal sepsis. As for the technic, he advocates the wedge-shaped excision with the preservation of mesentery intact, because of its ease of performance; because it is suitable for work in large intestines where the Murphy button is less practical; because in multiple resection it allows the passage without difficulty of a Murphy button if that has been used in the higher anastomosis, and because it combines rapidity with a high degree of safety. The angle caused by this anastomosis is functionally unimportant.

36. **The Sodium Chlorid-Nuclein Treatment of Puerperal Sepsis.**—Nineteen severe cases of general puerperal sepsis in Schauta's clinic have been treated with nuclein and salt solution, with one death. Nuclein in doses of 5 to 6 grams every 12 to 24 hours is given until the bone marrow reaction appears (bone sensitiveness). Five to six hundred grams of salt solution are given daily either subcutaneously or by the rectum. The recent investigations of the part played by the bone marrow in the regeneration of the blood and in the formation of immune bodies are discussed and a theory for the mode of action of the nuclein and the salt is given.

37. **Can the Bossi Method Be Regarded as an Advance in Operative Obstetrics?**—Dührssen has found in gynecologic practice that the cervix dilates to a certain point with solid dilatation and then tears easily; the same is true in obstetric work. He believes that Bossi's method, in many cases, can dilate only by producing tears, as in old primiparæ, in multiparæ having hard cervical scars, and in the premature labor of primiparæ. He cites a number of reported cases and draws the conclusions from them that in placenta previa the Bossi method is useless since it only increases bleeding, whereas the chief indication is not hastened delivery, but efficient hemostasis, which the metreurynter accomplishes well. If the cervix is obliterated in cases where the Bossi method either failed or dilated with severe tears and version or perforation had to be done, the author believes his method of incision into the cervix would have been best and harmless. He thinks the metreurynter fully as good as the Bossi instrument since it dilates, without tearing, sufficient for delivery in half an hour to one hour. In case it does not dilate, he believes the method of careful incision to be better. In cases of miscarriage where rapid emptying of the uterus is desirable and the cervix rigid, the vaginal cesarean section is preferable because of its ease and rapidity of accomplishment. If this be considered inadvisable, use the bag until some dilatation is made and then make the version according to his method. Dührssen does not believe that infection is carried in by the bag, as claimed by some, nor has he ever had trouble in introducing it. Crowding the advancing part and increasing tendency to prolapse of the cord are also urged against it, but he has never witnessed them. In either

event it is only preparatory to version and matters not. Altogether, the Bossi method is neither sure nor safe since it can not in every case dilate sufficiently to allow delivery of a living child, and because it causes uncontrollable tears and contusions favoring infection. The author believes the best method for rapid delivery in case of obliterated cervix is by deep incisions; in case of non-obliterated cervix, the use of the metreurynter and Mueller's bag with constant traction until the cervix is nearly obliterated. In case of non-obliterated and rigid cervix he prefers his vaginal cesarean section.

38. **Tuberculosis of the Placenta.**—Runge reports from the literature several cases in which fetuses were tubercular, being infected through the blood and placenta. He describes the histological changes in the placenta, showing how the bacilli pass from the mother's tissue into the placenta. In the case he himself reports, the tubercular infection occurred in the decidua basalis, while in all the other cases it was found only in the layer of chorionic villi. Here no groups of bacteria were found in either the capsularis or vera, but in the broad decidua they were found around the Nitabuch layer, in the glandular layer of decidua and in a tongue of decidua projecting between the chorionic villi.

40. **Function of the Corpus Luteum.**—Gustav Born of Breslau first suggested the hypothesis that the corpus luteum of pregnancy is a gland with intrauterine secretion having the function of causing the nidation and development of the egg. Fraenkel believes that he has established this theory by experiments, and he has extended it. He holds that there is no essential difference between the true and false corpora lutea, which are ovarial glands controlling the nutrition of the uterus from puberty to the climacterium, and causing the insertion and development of the fertilized egg and of menstruation when the egg remains unfertilized. The facts favoring this theory are the gland-like structure of the corpus luteum, and its growth after ovulation and the fact that only animals which have a uterine insertion of the egg possess developed corpora lutea. Experiments were made chiefly on rabbits and required considerable preliminary observation to determine the sexual physiology of these animals. By various series of experiments, in which he removed sometimes one or both ovaries, and sometimes one or all of the corpora lutea, Fraenkel determined that they are necessary to the insertion of the egg or to their development up to about 20 days. This trophic influence is exercised on the uterus by the internal secretion of the corpora lutea carried by the vessels. The influence of the so-called false corpus luteum was determined on animals by burning them out, when temporary atrophy of the uterus occurred. In women in a number of cases of laparotomy for ventrofixation and similar operations, the corpora lutea were removed, with the result that menstruation remained absent for one or two periods. Therapeutic use of these facts appears in the employment of "lutein" prepared from the lutein bodies, which prevents the appearance of the premature menopause symptoms. Also in operations on the ovary during pregnancy we should preserve the ovaries and their lutein bodies as long as possible.

41. **Intrauterine Rigor Mortis.**—To the 30 cases previously reported Wolff adds 4 more from the obstetrical polyclinic of the Berlin Charity Hospital. He concludes that the occurrence of this physiological phenomenon is not extremely rare, but generally overlooked. The rigor generally reaches its climax about three to four hours postmortem. If the child remains in the uterus over five hours after its death the rigor will probably nearly or quite disappear. Particularly early and severe rigor mortis occurs where the mother is in a dying condition before or during the birth of the child. He explains this fact by assuming an extreme disturbance of the circulation in the parous woman causing a retention of metabolic products in the fetus, which, after its death, influences the early and intense development of rigor mortis. This circulation disturbance in the mother is very frequently due to eclampsia, but may result from other causes.

43. **Influence of Menstruation, Pregnancy, Labor and of the Puerperium on the Muscular Power.**—Bossi used Mosso's ergograph to determine the variations in muscular power caused by menstruation, pregnancy, etc. To determine the effect of menstruation he made daily observations for several months on a number of midwife students. Some of these ergographic curves are reproduced in the paper. They show that menstruation has a morbid influence on voluntary muscular contraction. It is particularly noticeable that the muscular strength is diminished in the period preceding the bleeding. This fact is explained by the hypothesis that toxic substances are eliminated by menstruation. Just before menstruation these toxic substances have accumulated and exercise a deleterious effect on vital functions including muscular efforts. The observations on pregnancy, labor and the puerperium were made on a number of patients. They showed that muscular strength is lessened just preceding the physiological crises of pregnancy. These crises correspond to the times when menstruation would have occurred in the non-pregnant state. The effect of labor is also shown in the curves.

44. **Formation of the Enclosing Capsule in Tubal Pregnancy.** The covering of the egg in tubal pregnancy is held by some to be a decidua reflexa and by others folds of tubal mucous membrane. The study of six suitable specimens has led Voigt to the conclusion that the capsule is formed by the penetration of the egg into the maternal tissues and embedding of itself deep in the tubal walls. Thus the mucous membrane, the connecting tissues and also a part of the muscles surround and cover the ovum. In the course of further development this capsule may be so changed by the devouring action of the Langhan's cells or by hemorrhage that only band-like remnants of the walls remain. He found no trace of decidua reflexa.

46. **Cesarean Section for Eclampsia.**—Streckeisen reports two cases of cesarean section for eclampsia, both twin pregnancies. In one, both children were extracted dead and the mother died of infection. In the other both mother and children were saved. In 1897 Kettlitz collected 28 reported cases of cesarean section for eclampsia and found a mortality of 50 per cent. for the mother and 62 per cent. for the children. Streckeisen has collected 28 additional cases, including his own, which show a mortality of 32 per cent. for both mothers and children. The mortality of mothers for all 56 cases is 42 and of the children 46.5 per cent. As a result of his studies he concludes that the operation has a place in the treatment of eclampsia in extreme cases.

48. **Tuberculosis of Ovarian Tumors.**—Prüsman reports a case of this rare combination which is the thirteenth case now on record. Like most of the others the tumor was a cyst. Tubercle bacilli were found. He contends that the cyst in his case was secondarily infected and not that the introduction of the bacilli stimulated the growth of the cyst. On account of the absence of any signs of general or local infection, he admits the possibility of a primary infection in this case, possibly from sexual connection.

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51 (VI, 3.) Solid Tumors in Abdominal Cavity of Unknown Origin. F. Prüsmann (Kiel).—Zwei Fälle von soliden Tumoren der Bauchhöhle unbekannten Ursprunges.
52 *Ovarian Pregnancy. H. Füth (Leipsic).—Uber Ovarialschwangerschaft.
53 *Zur Bakteriologie des Lochialsekretes fieberfreier Wöchnerinnen. K. Franz (Halle).
54 *Zur Indikationsstellung für die Total-Exstipation des septischen Uterus. Baisch (Tübingen).
55 *Posterior Parietal Presentation. W. Zangemeister (Leipsic).—Ueber Hinterscheitelbeineinstellung.
56 Beitrag zum Studium der path. Anatomie der Atresia hymenalis congenita. O. Beuttner (Geneva).
57 Ein eigentümlicher Fall von inversio uteri senilis mit Bemerkungen über die operative Behandlung der Inversion überhaupt. R. von Fellenberg (Berne).
58 Mucous Polypi. O. Beuttner (Geneva).—Ueber Schleimhautpolypen der Uterushöhle.
59 *Diagnose und Behandlung der Genitaltuberkulose beim Weibe. H. Sellheim (Freiburg i. B.).
60 *Cancer Inoculation. H. Hellemdall (Tubingen).—Ueber Impfkarzinose am Genitaltraktus.
61 Fall von "Missed labour" bei Carcinoma uteri. A. Labhardt (Basle).
62 Weitere Beiträge zur Lehre der mesonephrischen Tumoren. G. Schickele (Strassburg).
63 (VII, 1.) *Ueber die Behandlung der Uterusruptur. P. Zweifel (Leipsic).
64 *Ueber die Entfernung entzündeter und durch Neubildung erkrankter Ovarien mittels vaginaler Kölliotomie. F. Heinsius (Greifswald).

65 *Accidental Injuries During Gynecologic Operations. A. Blau (Vienna).—Ueber die am Klinik Chrobak bei gynäkologischen Operationen beobachteten Nebenverletzungen.
66 *Beiträge zur Anatomie der ausgetragenen Extrauteringravidität. R. Freund (Halle).
67 Small, Recent Carcinoma of Cervix with Extensive Glandular Metastases. F. Tiburtius (Freiburg).—Collumkarzinom von kurzer Dauer und geringer Ausbreitung bei hochgradiger Lymphdrüsenmetastase.
68 Histologic Changes in Placenta Occasioned by Death of Fetus. H. Szasz (Budapest).—Ueber durch den Tod des Foetus bedingte histologische Veränderungen der Placenta.

52. **Ovarian Pregnancy.**—Füth describes a case which has all the marks of ovarian pregnancy demanded by Leopold, namely, absence of ovary on the side corresponding to the tumor and its participation in the formation of the fruit sac; union of the latter with the uterus through the utero-ovarian ligament, and complete freedom of the tube including the plica infundibuleovarialis. A lithopedion was found on the opposite side of the abdomen. Füth considers this the twenty-first case of proven ovarian pregnancy.

53. **Bacteria in the Lochia of Normal Puerpera.**—In order to determine whether the uterine cavity is sterile or not during the first nine days of the normal puerperium, Franz undertook the examination of 120 normal puerpera, namely those whose axillary temperature never exceeded 38 C. and who had no other pathologic symptoms. The secretion was taken according to the rules of Doederlein, and all was used in the cultures. Of 20 cases examined in the first two days of the puerperium, 8, that is 40 per cent., gave positive results. Of 100 cases examined in the third to ninth days, 63 were positive. Staphylococci were found twelve and streptococci nine times. Bacteria were found more often when the temperature was under 37.5 C. than when it was between 37.5 and 38 degrees. Cases with purulent secretions were more frequently contaminated than those with bloody or serous lochia. The greater the amount of the lochia the more likelihood of a positive finding. The findings were more frequently positive in multiparæ than primiparæ. There was less liability to contamination when the labor was protracted. The conclusions from this investigation are that there is no relation between contamination of the uterine cavity and the clinical symptoms, or in other words, the presence of bacteria in puerpera without fever is not pathologic.

54. **Indications for the Total Extirpation of the Septic Uterus.**—Baisch first considers the danger on account of sepsis of the complications of labor with complete inversion of the vagina with elongation of the neck of the uterus. In only 31 cases of 124 reported in the literature was labor spontaneous. The mortality of the children was 30 per cent., and of the mothers about 11 per cent. In two cases of Doederlein's clinic in Tübingen hysterectomy probably saved the patient's lives, while in one where operation was refused, the patient died. Baisch concludes that in cases of total prolapse when fever exists during labor, hysterectomy is indicated. A discussion of other indications leads to the conclusion that cases of mixed infection and saprophytic disease call most often for surgical interference because intoxication from the latter makes it very difficult for the organism to successfully combat the infection.

55. **Posterior Parietal Presentation.**—Zangemeister divides the cases into primary and secondary, depending on whether the membranes are intact or not. Primary cases are rather common and generally terminate spontaneously. In 2,250 labors 10 cases of secondary posterior parietal presentation occurred (equal to .44 per cent.), 2 of which terminated spontaneously. He concludes that turning is best when the presentation does not improve in a short time. If turning is impossible on account of danger of rupture, spontaneous delivery may be waited for under certain conditions. Symphysiotomy is in these cases valuable. External or combined rectification is almost always impossible. High forceps is allowed only as a trial before perforation of a living child.

59. **Diagnosis and Treatment of Genital Tuberculosis in Women.**—Sellheim calls especial attention to Hegar's sign of pelvic tuberculosis found by internal examination, namely, presence of numerous nodules from the size of a pin's head to a lentil on the ligamenta sacro-uterina, the posterior surface of the uterus and of the ligamenta lata. Operative treatment should be instituted only when thorough general and local treatment fail to stop the progress of the infection. To determine the value of both methods Sellheim has studied the results in cases treated in the Freiburg clinic during the last eight years. There were 31 palliative and 27 operative cases. He found the results of the palliative treatment satisfactory as far as disappearance of pain, ability to work and shriveling of diseased organs were concerned. In the operative cases he found the best results in the radical operations where both adnexa and uterus were removed.

60. **Cancer Inoculation in the Genital Tract.**—Hellendall concludes that no case of cancer metastasis in the vagina through inoculation from a corpus or a cervix cancer has been proven to occur, and that the probability of such an inoculation can not be assumed since a careful microscopic examination has not excluded the possibility of distribution of the cancer in a retrograde manner through the veins and lymphatics.

63. **Treatment of Uterus Rupture.**—Zweifel holds it very important to distinguish between complete and incomplete rupture. For the latter, drainage is a satisfactory treatment, but not for the former. He recommends here laparotomy and careful suture of the serosa not including the musculature which should always be regarded as infected. After recovery the patient may be sterilized by excising a piece of each tube to prevent rupture in a subsequent pregnancy. After suturing the tear the peritoneal cavity should be carefully cleaned from blood. He reports 29 cases from his clinic.

64. **Vaginal Ovariotomy.**—Heinsius describes the technic adopted by A. Martin and discusses the indications for operation and the complications which may arise. A table is given of the 110 cases operated on at Greifswald.

65. **Accidental Injuries During Gynecologic Operations.**—The effort made in recent years to increase the thoroughness of operation for malignant disease has resulted in an increase in the injuries to neighboring organs, namely, the ureters, the bladder, and the bowels. A study of the accidents that have occurred at Chrobak's clinic in the last twelve years has been made by Blau. They are classified, compared with those of other clinics as far as possible, and their treatment considered. In 2,193 operations 45 (equal to 2 per cent.) accidents have occurred. The ureters were injured 15 times, bladder 21 times and bowels 14 times. The mortality of ureteral injuries was 80 per cent., of bladder injuries 43, and of bowel injuries 78 per cent. Of the 45 operations 24 were laparotomies with 26 injuries, including 10 of the ureters, 7 of the bowels, and 9 of the bladder. Twenty were vaginal operations, with 23 injuries, including 4 of the ureters, 12 of the bladder and 7 of the bowels, and one was a sacral hysterectomy with 1 injury to the ureters.

66. **Extrauterine Pregnancy at Term.**—Freund reports a case of unruptured tubal pregnancy at term with a fungiform placenta, and discusses the features of this rare case (only four others are known). The chief conclusion from the study is that where the placenta is inserted on the mesosalpinx it takes a fungus form whose stalk is formed by the vascular tubal wall. On account of the great development of the vascular apparatus the musculature can remain intact to the end of pregnancy. Freund also reports a case of lithokelyphopedion and gives a table of 10 other cases known.

### Centralblatt f. Gynaekologie, Leipsic.

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69 (XXVII, 13.) *Zur Radikaloperation der Nabelbrüche und der epigastrischen und subumbilikalen Hernien der Linea alba. Menge (Leipsic).
70 *Lateral Symphysiotomy. L. Meyer (Copenhagen).—Fall von Lateralschnitt durch das Os pubis nach Gigli.
71 *Eine neue Methode der Prolaps-Operation. A. Rieck (Altona).
72 (No. 14.) *Retention of Fetus After Laceration of Gravid Uterus. L. Goth (Kolozsvar).—Fruchtretention nach Zerreissung der schwangeren Gebärmutter.
73 Zur Narkosen-Frage. G. Burckhard.
74 *Ueber Impregnierung. E. Toff (Braila, Roumania).
75 (No. 15.) Origin of Cervico-Vaginal Fistula. A. Ostreil (Prague).—Fall von Fistula cerv.-vag., bei welchem der Entstehungsmodus direkt beobachtet wurde.

76 *Ein neues Pessarium zur Behandlung grosser inoperabler Genitalprolaps. Menge (Leipsic).
77 Tetanie nach einer Perineoplastik. L. Goth (Kolozsvar).
78 (No. 16.) Case of Dorso-anterior Frontal Presentation. F. Ahlfeld.—Fall von dorso-anteriorer Vorderhauptslage.
79 Vaginal Cesarean Section for Uncontrollable Vomiting. E. Ehrendorfer.—Zum konservativen vaginalen Kaiserschnitt, ausgeführt wegen unstillbaren Erbrechens in der Schwangerschaft. One case. Successful.
80 *Vaginal Cesarean Section in Eclampsia. A. Dührssen (Berlin).—Ein weiterer Fall von vaginal Kaiserschnitt bei Eclampsia gravidităitis.
81 Phantom for Teaching How to Protect the Perineum. W. Zangemeister (Leipsic).—Ein Dammschutzphantom.
82 (No. 17.) *New Sign of Multiple Pregnancy. Jentzer.—Ein neues Zeichen von mehrfacher Schwangerschaft.
83 Apparent Abdominal Pregnancy in Rabbit After Primary Rupture of Uterus. K. Kamann (Greifswald).—Scheinbare Abd.-Gravidität beim Kaninchen, etc.
84 *Welterer Beitrag zur Bekämpfung des Ileus mittels subkutaner Strychnin-Injektionen. H. Grube.
85 Zur Technik der Fülling des Kolpeurynters. A. Foges. (Vienna).
86 (No. 18.) *Self-holding Speculum. S. Spiegel (Schauta's clinic, Vienna).—Ein neues selbsthaltendes Spekulum.
87 Complications of Ovarian Dermoids. Ahrens.—Komplikationen bei Eierstocksdermoiden.

69. **Radical Treatment of Hernias on Linea Alba.**—Menge has recently operated on two very large umbilical hernias and one subumbilical, by a modification of Biondi's method of combined vertical and transverse incision. He aimed to produce a very broad, flat adhesion of the fascia to the muscle at the point of the previous hernia, and the results confirmed his assumption that this technic would impart great solidity to the cicatrix. The anterior lamella of the sheath of the rectus was incised across to a distance of 3 or 4 cm. on each side of the hernial opening, the rectus itself divided lengthwise with the fingers and the posterior lamella of the sheath also incised across. Each lamella was then sutured across; the rectus with a vertical suture. The wound healed rapidly by primary intention in each case, but further experience will show whether this technic allows the development of a hematoma under the fascia, and whether the circulation in the fascia and muscles will be impaired.

70. **Lateral Symphysiotomy.**—Meyer reports a case in which he performed pubiotomy or extramedian symphysiotomy according to Gigli's technic. The child had been born dead in a previous pregnancy, terminated by obstetric maneuvers. At term, with the second pregnancy, the rachitic pelvis measured only 7 to 7.5 cm., labor was energetic and head movable above the inlet, which it was unable to enter. Instead of making an oblique incision, Meyer incised vertically, inserting his finger from below and catching with it the wire saw introduced from above. The sawing was thus parallel to the median line and proceeded with surprising ease. The child was then extracted without difficulty, the bone gaping about 5 cm. The pubis was sutured with silver wire, with a small drain tube left at the lower angle of the wound, removed the sixth day. There were no urinary disturbances except that catheterization was necessary for four days. The union seemed solid by the seventeenth day and the patient was allowed to get up the twenty-first. The gait is free and natural and she can stand on either foot alone without trouble. There has been no displacement of the bones. The child weighed 3,700.51 gm. This is the fourth pubiotomy Meyer has done and all the patients rapidly recovered. He mentions that the treatment after an operation on the symphysis or pubis is much facilitated by the Borries litter, made at Copenhagen. He suggests as the only drawback to this extramedian symphysiotomy, the possibility that the circulation of the small fragment of bone left adherent to the symphysis may be interfered with. His experience indicates that the circulation is adequate, but time alone can fully decide the question. (Gigli's communication on the subject was reviewed in THE JOURNAL, xxxix, p. 226.)

71. **New Method of Prolapse Operation.**—Rieck is able to ensure complete relief and freedom from recurrence even in cases of total prolapse of uterus and vagina. The uterus is detached from the bladder and the latter with its peritoneal covering is fastened on the posterior surface of the uterus, while the anterior wall of the vagina is sutured to its anterior surface and up over the top of the fundus. As the uterus is thus fastened in extreme anteflexion between the bladder and vaginal wall there can be no further prolapse, and the bladder is prevented from pushing down the vaginal wall as the uterus is interposed. The rear wall of the vagina is sutured to the perineum and does not show even if it may stretch a little. In case of women still in the child-bearing period a less radical procedure is preferable. In this case the anterior wall of the vagina is incised on the median line and the two halves superposed, thus doubling the wall of the vagina along this part. The detached mucosa with its raw connective tissue surface healed perfectly to the epithelium surface in the 4 cases that have been treated according to this technic. No tendency to further prolapse could be discovered three weeks after dismissal. Two of the patients had total prolapse of both uterus and vagina, and the operation was completed by low vaginofixation in the younger patient and high fixation in the patient at the climacteric age. It remains to be seen whether this doubled vaginal wall will interfere with childbirth later.

72. **Retention of Fetus After Laceration of Uterus.**—A v-para was injured in the abdomen during the seventh month of pregnancy and the movements of the fetus were no longer perceptible after the traumatism. Six weeks of good health followed, after which she applied for treatment on account of severe pains in the abdomen and slight fever. Investigation revealed a tear in the anterior wall of the cervix and in the cavity thus formed the remains of a seven-month fetus. No placenta could be discovered. Goth ascribes the rupture to the traumatism, and thinks that the uterus was rendered incapable of labor and behaved like a loose sac, as in an extrauterine pregnancy. This explains the absence of any indications of labor.

74. **Impregnation.**—Toff is convinced that the female organism is more or less essentially altered by the reception of the male semen in considerable amounts, and becomes in time impregnated with the organic juices or chemical combinations of the male organism. This influence is particularly marked, he thinks, during and following pregnancy. Elderly virgins and women who prevent conception are liable to suffer from various affections which are possibly due to the lack of the vital forces which normally are transmitted from the male to the female organism. On the other hand, the influence of the male organism may be detrimental in case it is diseased. Women, healthy until marriage, sometimes suffer from headaches, anemia, nervous affections, etc., which may be due to toxins transmitted in this way from the male. He suggests that this may prove to be one of the factors in uncontrollable vomiting of pregnancy, eclampsia, kidney affections, etc. The closer to nature the life of the people, the healthier are the men and women and the smoother the course of pregnancies and childbirth.

76. **Pessary for Large Inoperable Prolapse.**—Menge's instrument is a large oval ring with a crossbar. A pear-shaped knob fits into a hole in the center of this crossbar, after the ring has been inserted in the vagina. By its introduction in two parts, it is thus possible to use a larger ring than would be otherwise applicable, and it proves an effective obstacle to further prolapse. He calls it the "Keulenpessar," as the knob resembles somewhat the pestle of a mortar. It fits into the crossbar with a bayonet catch, and holds the ring perpendicular to the axis of the vagina.

80. **Vaginal Cesarean Section in Eclampsia.**—Dührssen describes a case in which he delivered a primipara in severe eclampsia of a child weighing 4,500 gm. with a head circumference of 37 cm. The vagina was very narrow, but the entire operation was complete and the child extracted in eight minutes. The wound healed by primary intention; involution of uterus proceeded apparently normally and recovery was rapid. There were no convulsions after delivery. He recommends in primiparæ to previously incise the vagina, making the opening in both vagina and uterus large enough to admit a man's fist. He points out that his operation is both intra- and supravaginal, as well as bilateral on the uterus. Through the anterior incision in the vaginal wall he detaches and pushes back the bladder and processes of peritoneum without opening the

abdominal cavity, and thus frees the wall of the uterus so that after it is incised a large child can be delivered alive, as he has accomplished in his 4 cases.

82. **New Sign of Multiple Pregnancy.**—Jentzer was able to palpate two fetal heads, and mentions that when they were brought in contact they felt like billiard balls knocked together in water. In the case described the woman was delivered of triplets, but the third fetus escaped detection. This and a following birth proceeded normally, although she had been previously treated by ventrofixation for painful retroflexion. In 5 other cases of childbirth consecutive to ventrofixation the course of the pregnancy and puerperium was normal in every respect.

84. **Strychnin in Ileus.**—Grube attributes the favorable result in the case he reports to his subcutaneous administration of .01 gm. strychnin nitrate in three doses in four hours, followed six hours later by .005 gm. Peristalsis was excited; the heart symptoms subsided and the patient soon recovered. The ileus was due to severe paralysis of the intestines subsequent to removal of a purulent sacrosalpinx with suppurative encapsulated peritonitis. He adds that this case emphasizes the advantages of vaginal intervention, as the peritonitis remained circumscribed, and was not spread over the entire peritoneum as liable with a laparotomy.

86. **Self-Holding Speculum.**—Spiegel's instrument screws to the edge of the table and the speculum part is adjustable at any angle. It dispenses with the presence of an assistant to hold the speculum, and has never caused trouble of any kind during several months' experience with it in constant use at Schauta's clinic.

### Deutsche Med. Wochenschrift, Berlin and Leipsic.

88 (XXIX, 17.) *Nerve Grafting. W. Körte and M. Bernhardt.—Fall von Nervenpropfung: des Nervus facialis auf den Nervus hypoglossus.
89 Previous Warming in Steam Sterilization. R. Beckmann.—Zur Frage über die Zulässigkeit von Vorwärmevorrichtungen in Dampfsterilisatoren.
90 *Zur Färbe- (staining) Technik der Malaria-Parasiten. J. Koreck (Szerb-Csanad, Hungary).
91 Beitrag zur Serum-Behandlung der Diphtherie. Geissler.
92 Apparat zur Kochsalz-Wasser-Infusion. E. Braatz (Königsberg).
93 Medicolegal Study of Criminal Responsibility. Biberfeld.—Geisteskrankheit oder Geistesschwäche.
94 (No. 18.) *Further Attempts to Produce Specific Substances from Bacteria. L. Brieger and M. Mayer.—Weitere Versuche zur Darstellung spezifischer Substanzen aus Bakterien.
95 *Ueber den Paratyphus. H. Kayser (Strasburg).
96 Ueber einheimische Malaria und Malaria-Kachexia. Reckzeh (Berlin).
97 Balneology in the Army. Schültzen.—Ueber Verwendung balneologischer Hülfsmittel und Benutzung von Kurorten in der Armee. (Commenced in No. 17.)
98 *Treatment of Trifacial Neuralgia. C. Lilienfeld (Charlottenburg).—Zur Behandlung der Trigeminusneuralgie.
99 Training of Nurses. P. Jacobsohn (Berlin).—Zur Ausbildung der Krankenpfleger und Krankenpflegerinnen.
100 *Primäre Angina gangränosa bei einem Knaben. E. Oberwarth.
101 Protective Antidysentery Inoculation. K. Shiga.—Ueber Versuche zur Schützimpfung gegen die Ruhr. Claim for priority.
102 (No. 19.) Protozoa in Blood in Spotted Typhus. E. Gotschlich (Alexandria).—Ueber Protozoenbefunde (Apiosoma) im Blute von Flecktyphuskranken. Six cases.
103 *Artificial Production of Adhesions in Pleura for Surgical Purposes. Karewski and E. Unger.—Ueber künstliche Erzeugung von Pleuraverwachsungen zu chir. Zwecken.
104 Ueber die akute primäre Osteomyelitis der Wirbelsäule (of spine). F. Weber. One case.
105 *Volumetric Determination of Albumin in Urine. O. Rössler (Baden-Baden).—Die vol. Eiweissbestimmung im Harn.
106 *Ueber Thoracoplastik und Höhlen-Desinfektion bei Lungen-Phthise. C. Spengler (Davos-Platz). (Commenced in No. 18.)
107 Spontaneous Retrogression of Hydronephrosis in Diabetes. Zaudy.—Eine seltene Complikation des Diabetes mellitus.
108 (No. 20.) *Ueber Pulsus paradoxus. F. Riegel (Giessen).
109 *Relations of Slight Infections to the Blood-forming Apparatus. F. Freymuth.—Exp. Untersuchungen über die Beziehungen leichter Infektionen zum Blut-bildenden Apparat.
110 Influence of Removal of Liver on Freezing-point of Blood. A. Pflughoeft.—Exp. Untersuchungen über den Einfluss der Leberausschaltung auf den Gefrierpunkt des Blutes.
111 Spontaneous Recovery After Injury of Liver and Puncture. C. Francke.—Zerreissung der Leber und eines grossen Gallenganges nach Bauchpunktion spontan geheilt.
112 Athyreosis im Kindesalter (in children). R. Bartz.
113 Tropenkrankheiten und Koloniale Medizin. Steuber (Küstrin).

88. **Nerve Grafting.**—In operating on a suppurating temporal bone, the facial nerve was severed at the stylomastoid foramen, and the distal stump was fastened side by side to the hypoglossal nerve. The facial and hypoglossal domains were paralyzed for six months, the former totally, the latter partially, causing some slight disturbances in swallowing. Then gradual improvement was noted, electric excitability gradually returned, and the corner of the mouth can be now actively moved. The voluntary impulse is thus successfully transmitted to the facial muscles by way of the hypoglossal, and further improvement is anticipated in time. The partial paralysis of the hypoglossal shows that only a healthy nerve can be utilized for such grafting. The tongue still moves involuntarily with the voluntary movements in the facial domain, nearly a year after the operation, as in Kennedy's case, in which the facial muscles moved as the trapezius was contracted. Körte, in future, would choose the accessory nerve instead of the hypoglossal in such a case as paralysis in its domain is of much less importance than in the hypoglossal.

90. **Stains for Malaria Parasites.**—Koreck gives a number of formulæ for stains and shows that the age of the solution as also the amount of heat to which it has been subjected, have an influence on the result of the stain. His improved Ziemann stain is made by adding .5 gm. collargol to 100 c.c. of a 1 per cent. solution of methylene blue and using it in the proportion of 1 to .6 of the eosin solution. The resulting stain is fine in fifteen minutes or less.

94. **Production of Specific Substances from Bacteria.**—Brieger has found that it is possible to derive from a solution of typhoid cultures a non-toxic substance which confers high agglutinating power on rabbit serum, but no bactericidal or protecting properties. He describes his technic.

95. **Paratyphus.**—Kayser reports 3 cases of apparent typhoid fever in which the serum agglutinated the paratyphus bacilli, type B, while it had no effect on true typhoid bacilli. Two of the patients were sisters about 25, the third a child of 8. There was no albuminuria, but severe headache in the 2 first and edema of the lids and painfulness of the spine in the latter case. He adds that experience with these paratyphus cases to date indicates that the infection is mild, but that in testing for the agglutination both type A and type B of the paratyphus bacillus must be tested. He protests against the use of the term typhoid instead of typhus, claiming that the former should be restricted to "ileotyphus."

98. **Electromagnetic Treatment of Trigeminal Neuralgia.**—Lilienfeld has cured 11 and materially improved 65 out of a total of 90 cases of trigeminal neuralgia treated by electromagnetic seances. Almost all his patients had suffered for years from neuralgia, some for ten to twenty-five. He describes 7 typical severe cases in detail. In one the pain was mitigated after the fifth application of the alternating magnetic field, 15 amperes. By the fifteenth the patient was freed from pain during the day, and by the thirtieth entirely relieved except for occasional comparatively slight twinges during the night. Treatment was interrupted at this point, but the improvement has continued for three months to date. In another very severe case after twelve years of suffering the patient was dismissed completely cured by a course of 50 applications. All these chronic cases had been previously treated with the usual measures without avail, and even if the neuralgia should return later, the months of freedom from pain are certainly an immense gain.

100. **Primary Gangrenous Angina.**—The patient was a lad of 12 who had passed through measles and typhoid in early childhood. The malignant angina developed with exacerbations. The first stage was characterized by pains in ear and neck on right side, subsiding after a week; two weeks later pains occurred in the ear and neck, and the tonsil, palate and uvula on the left side were found to be ulcerated. The ulcerations healed and for ten days there was no further trouble, but then a gangrenous abscess developed in the right tonsil, and ten days later in the left. The spleen was enlarged. The angina retrogressed by the end of ten days, leaving merely a whitish deposit on the right side of the throat. A few days

later severe symptoms again appeared, with high fever, pains in the left side of the neck and petechiæ. This stage also subsided, and for a month the little patient seemed well, except for a transient attack of heart weakness. The fifth and fatal stage then set in and the gangrene in the throat spread with a fatal termination in ten days. The petechiæ during the last three stages were noticeable, as also a severe hemorrhage from the retina during the terminal stage. Numerous internal hemorrhages were also observed at the autopsy. In this, as in 2 other cases on record, a loud systolic murmur was heard during the last stages of the affection, but the assumption of a vitium cordis was not confirmed by the autopsy. Treatment had been energetic, with lactic acid, etc.

103. **Artificial Production of Pleural Adhesions for Surgical Purposes.**—Karewski proclaims that he has succeeded in inducing effective adhesion by means of a combination of chemical irritation, trauma and prevention of displacement of the sheets of the pleura. He accomplishes this by the use of silk threads impregnated with turpentine, uniting the interspaces with the lung pleura. The turpentine suture attracts the leucocytes and entails a deposit of fibrin, thus walling off the part of the lung desired with a broad sheet of adhesions or merely a circular wall, according to the way the sutures are applied, either parallel through the interspaces or circular around the focus. His experiments were made on large dogs, and he found that in three days firm union was realized by this means over a flat surface. Linear adhesions required a few more days to form a strong enough wall. He thinks that the conditions in man would be much more favorable for the formation of adhesions by this technic.

105. **Volumetric Determination of Albumin.**—Rössler states that it is possible to determine the amount of albumin in the urine, even in a proportion of 1/120,000, by means of a mixture of 2 parts succinic acid, 1 part sublimate, .1 part sodium chlorid and 50 parts distilled water. Three drops are added to 5 c.c. of dilute acetic acid and the urine added to form a layer, as in the potassium ferrocyanid test, of which this is a modification. The height of the white zone that forms from the combination with albumin indicates the amount of the latter. It is measured with a compass and by comparison of the results obtained at rest, after exercise, medication, baths, etc., a characteristic curve is obtained. The increase in the amount, after walking for an hour, after two hours' mountain climbing, etc., was much more marked in case of kidney disease, and the method is thus able to reveal the latter in its incipiency. Kussmaul adopted the following system: the first day the albumin was determined during complete rest; the second day after an hour's walk and the third day after two hours' moderate mountain climbing. In case of mere spermatorrhea the curve was flat or dipped slightly down, as was also the case when the albumin was due to the presence of pus in the urine, but in case of kidney disease, the curve rose each day, and the third day was nearly three times the height of the first day. In case of kidney disease with spermatorrhea the ascent to the third day was more gradual and not so high at the last, as in case of kidney disease alone. In case of a suppurative affection of the bladder or uterus in addition to the kidney affection, the height of the zone was above that of the other curves on the first day and considerably higher on the two following days. The curves thus obtained correct many a mistaken diagnosis. In one instance they contradicted the assumption of a kidney affection for which the patient had been treated elsewhere for two years. Catarrh of the uterus was diagnosed and the patient promptly cured by appropriate treatment.

106. **Thoracoplastic Operation and Disinfection of Lung Cavities.**—Spengler advocates disinfection of the lungs in case of tuberculosis or other severe affections of the respiratory passages, by means of inhalation of a mixture of 5 c.c. formalin, 20 c.c. absolute alcohol and 75 c.c. ether. Ten drops of this mixture are poured into a tumbler and inhaled in ten deep breaths through the opened mouth once every second day, or five drops morning and evening on alternate days. After fourteen days of these inhalations he suspends them for several days. He has never seen any harm from these doses even when long continued, and some of his patients inhaled as much as forty drops six times a day, but he found that these larger amounts depressed the vitality and thus favored bacterial proliferation. He, therefore, warns against more than ten drops on alternate days, continued with interruptions until the bacilli have disappeared from the sputum. In case of laryngeal tuberculosis, once in three days is probably sufficient and caution is also needed with nephritic patients. Pure formalin is too irritating and not volatile enough. Even in advanced cases the measure is useful for the protection of others. It should be used in all cases of cavity formation with rigid walls and inadequate evacuation of the products in the cavity. In case it fails to relieve after thorough trial, he urges resection of ribs to mobilize the thorax and thus allow the parts to expand and contract. But the inhalations will frequently reduce the suppuration to such a point that intervention is not required and many cases of phthisis with cavities heal in a remarkably short time. He has performed such a thoracoplastic operation eight times and one of the patients is clinically cured. All were cases of severe bilateral infection. His experience indicates that the sweats in tuberculosis aid in the absorption and elimination of the exudate in the lungs, and should not be suppressed. The amount of sputum in twenty-four hours and physical examination are aids for locating and measuring the size of the cavity. Inhalation of the "F.-A.-E. mixture" described above causes, in isolated cases, rapid decrease in the amount of sputa and number of bacteria, both the tubercle bacilli and others, but this occurs only in favorable circumstances. When there is active mixed infection, the germs ensconced deep in the parenchyma of the lung, inaccessible to the formalin vapors, the results will be meager or negative. He illustrates and describes the technic of the thoracoplastics which he recommends.

108. **Pulsus Paradoxus.**—Riegel distinguishes three causes for this condition. In the first group it is the result of compression of the large vessels from the effects of mediastino-pericarditis. The swelling of the veins in the neck during inspiration is important in the differentiation of this group. The heart is not implicated in the production of the paradoxical pulse but rather works with extra energy on account of the resistance in the aorta. The apex beat is not weaker during inspiration but stronger than usual, as also the heart sounds. In the two other groups the pulsus paradoxus is the expression of impaired heart action. In one the cause is interference with the intake of air, as in laryngeal stenosis, pneumonia, capillary bronchitis, etc. As the air can not enter freely, the negative pressure during inspiration is increased, and the normal inhibiting influence of inspiration on the heart is unduly magnified. If tracheotomy is done the paradoxical pulse disappears at once. In the other of these two groups the cause is to be sought in the enfeeblement of the heart, which is unequal to its task. In such cases the paradoxical pulse may vanish on exhibition of digitalis. Distinction of these three types of causes is important for treatment, although it is possible for two or more of them to be associated in a case.

109. **Relations of Mild Infections to the Blood-Forming Apparatus.**—This communication from Koch's Institute for Infectious Diseases announces that minute doses of infectious germs, so small as to be unable to produce any symptoms in the laboratory animals, yet exerted a specific influence on the blood-forming apparatus, stimulating it to unusual activity. Even a very mild infection, therefore, may be able to excite this apparatus to abnormal functioning, a fact important for the clinic. Not only the bacteria but even their dissolved toxic products exerted this influence. This fact may explain the puzzling anemias noted in chronic obstipation. Also the abnormal heart action, the nervous symptoms, general and local, the depression, etc., may be due to absorption of toxic substances from the intestines and to their influence on the blood-forming apparatus, as whenever this apparatus is unable to fulfill the extra demands on it, its functions must suffer, and principally the regeneration of the blood. Many puzzling cases

of anemia and chlorosis may be the result of some apparently insignificant infection and its effect on the hematopoietic organs. In such cases infection in the respiratory, digestive and female genital organs must be excluded before we can institute appropriate treatment.

## Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures, and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and Other Topics of Interest to Students and Practitioners, by Leading Members of the Medical Profession Throughout the World. Edited by A. O. J. Kelly, A.M., M.D., Philadelphia, U. S. A. With Regular Correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Volume I. Thirteenth Series, 1903. Cloth. Pp. 306. Price, $2.00. Philadelphia: J. B. Lippincott Co. 1903.

A SYSTEM OF PHYSIOLOGIC THERAPEUTICS. A Practical Exposition of the Methods, Other Than Drug-Giving, Useful for the Prevention of Disease and in the Treatment of the Sick. Edited by Solomon Solis-Cohen, A.M., M.D., Senior Assistant Professor of Clinical Medicine in Jefferson Medical College. Volume X. Pneumotherapy, Including Aerotherapy and Inhalation Methods and Therapy. By Dr. Paul Louis Tissier, One-Time Interne of the Paris Hospitals. Illustrated. Cloth. Pp. 479. Price, $27.50 per set. Philadelphia: P. Blakiston's Son & Co. 1903.

THE SURGICAL DISEASES OF THE GENITO-URINARY ORGANS. By E. L. Keyes, A.M., M.D., LL.D., Consulting Surgeon to the Bellevue, and E. L. Keyes, Jr., A.B., M.D., Ph.D., Lecturer on Genito-Urinary Surgery, New York Polyclinic Medical School and Hospital. A Revision of Van Buren and Keyes' Text-Book. With 174 Illustrations in the Text and 10 Plates, 8 of Which Are Colored. Cloth. Pp. 827. Price, $5.00. New York and London: D. Appleton & Co. 1903.

BACTERIOLOGY. A Manual for Students and Practitioners. By Ferd. C. Zapfee, M.D., Professor of Pathology in the Illinois Medical College. Series Edited by Bern B. Gallaudet, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University. Illustrated with 146 Engravings and 7 Colored Plates. Cloth. Pp. 350. Price, $1.50 net. Philadelphia and New York: Lea Brothers & Co.

DISEASES OF THE HEART AND ARTERIAL SYSTEM, Designed to Be a Practical Presentation of the Subject for the Use of Students and Practitioners of Medicine. By Robert H. Babcock, A.M., M.D., Professor of Clinical Medicine and Diseases of the Chest, College of Physicians and Surgeons, Chicago, Ill. With 3 Colored Plates and 139 Illustrations. Cloth. Pp. 853. Price, $6.00. New York and London: D. Appleton & Co. 1903.

PRACTICAL HANDBOOK OF THE PATHOLOGY OF THE SKIN. An Introduction to the Histology, Pathology, and Bacteriology of the Skin, with Special Reference to Technic. By J. M. H. MacLeod, M.A., M.D., M.R.C.P., Assistant in the Dermatological Department, Charing Cross Hospital. With 8 Colored Plates and 32 Black and White Plates. Cloth. Pp. 408. Price, $5.00 net. Philadelphia: P. Blakiston's Son & Co. 1903.

A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS. By Roberts Bartholow, M.A., M.D., LL.D., Professor Emeritus of Materia Medica, General Therapeutics, and Hygiene, in the Jefferson Medical College of Philadelphia. Eleventh Edition, Revised and Enlarged. Cloth. Pp. 866. Price, $5.00. New York and London: D. Appleton & Co. 1903.

HYGIENIC LABORATORY. Bulletin No. 10. M. J. Rosenau, Director. February, 1903. Report on the Prevalence and Geographic Distribution of Hookworm Disease in the United States. By Ch. Wardell Stiles, Ph.D., Chief of Division of Zoology. Paper. Pp. 121. Washington: Government Printing Office. 1903.

WILD OATS. A Sermon in Rhyme. By Maurice C. Hime, M.A., LL.D., Sometime Head-Master of Foyle College, Derry. Cloth. Pp. 49. Price, One Shilling. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Co. 1903.

TRANSACTIONS OF THE AMERICAN ROENTGEN RAY SOCIETY. Third Annual Meeting, Chicago, Ill., December 10 and 11, 1902. Paper. Pp. 178. Louisville: Courier-Journal Job Printing Co. 1903.

THE JOHN CRERAR LIBRARY. Eighth Annual Report. For the Year 1902. Paper. Pp. 45. Chicago: Printed by Order of the Board of Directors. 1903.

PRACTICAL SYNONYMS. By John H. Bechtel. Cloth. Pp. 226. Chicago, New York and London: Page Davis Co.

SECOND ANNUAL REPORT OF THE LEWIS HOSPITAL of Bay City, Mich., Jan. 15, 1903. Paper. Pp. 25.

## The Public Service.

### Army Changes.

Movements of officers of the Medical Department, U. S. A., under orders from the Adjutant General's Office, Washington, D. C., for the week ending May 30, 1903:

Ashburn, James K., contract surgeon, is granted an extension of leave for ten days.

Farr, Charles W., first lieut. and asst.-surgeon, granted leave January 28, has extension of two months, and is changed to two months' sick leave from April 26, 1903.

Fanning, George J., contract surgeon, is granted an extension of leave for one month from May 22.

Gorgas, William C., colonel and assistant-general, now on leave in New York City, will report on June 1 to the commanding general, Department of the East, for temporary duty as chief surgeon of that department during the absence on leave of Colonel Henry Lippincott.

Gregory, William G., contract surgeon, is granted leave for one month on surgeon's certificate, with permission to leave the Department of California and is granted permission to apply for an extension of one month.

Godfrey, Guy C., captain and asst.-surgeon, is relieved from further duty in the Division of the Philippines, and will proceed to San Francisco, Cal., and report by telegraph to the Adjutant General of the Army for further orders.

Jones, George H., contract surgeon, now on leave at Toledo, Ohio, is relieved from further duty in the Division of the Philippines and will proceed to Fort Fremont for duty, to relieved Contract Surgeon J. Randolph Harmer, who will proceed to Fort Totten for duty.

McCulloch, Champe C., Jr., captain and asst.-surgeon, is relieved from further duty in the Division of the Philippines and will proceed to San Francisco, Cal., and report by telegraph to the Adjutant General of the Army for further orders.

### Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended May 29, 1903:

SMALLPOX—UNITED STATES.

Alabama: Mobile, May 16-23, 4 cases.
California: Los Angeles, May 8-16, 1 case; San Francisco, May 10-17, 2 cases.
Colorado: Denver, April 25-May 2, 19 cases.
Illinois: Belleville, May 16-23, 1 case; Chicago, May 16-23, 9 cases.
Indiana: Elwood, May 17-24, 6 cases; Indianapolis, May 16-23, 3 cases.
Iowa: Des Moines, May 16-23, 1 case.
Kentucky: Newport, May 8-23, 2 cases.
Louisiana: New Orleans, May 16-23, 4 cases.
Maine: Biddeford, May 16-23, 1 case.
Maryland: Baltimore, May 16-23, 1 case.
Massachusetts: Holyoke, May 16-23, 1 case.
Michigan: Detroit, May 16-23, 25 cases, 1 death; Grand Rapids, May 16-23, 1 case; Port Huron, May 16-23, 1 case.
Minnesota: Winona, May 16-23, 3 cases.
Missouri: St. Louis, May 17-24, 20 cases.
Nebraska: Omaha, May 16-23, 1 case.
New Hampshire: Manchester, May 16-23, 4 cases; Nashua, May 16-23, 6 cases.
New Jersey: Camden, May 16-23, 1 case.
New York: Elmira, May 16-23, 1 case; New York, May 16-23, 1 case; Rochester, May 14-21, 6 cases.
Ohio: Ashtabula, May 16-23, 2 cases, 1 death; Cincinnati, May 15-22, 15 cases; Dayton, May 16-23, 5 cases.
Pennsylvania: Altoona, May 16-23, 1 case; Carbondale, May 14-21, 1 case; Johnstown, May 16-23, 1 death; McKeesport, May 16-23, 1 case; Philadelphia, May 16-23, 18 cases, 4 deaths; Pittsburg, May 16-23, 24 cases, 3 deaths, 1 case imported from West Virginia; Reading, May 18-25, 1 case.
South Carolina: Charleston, May 16-23, 10 cases, 1 death.
Utah: Salt Lake City, May 16-23, 3 cases.
Wisconsin: Milwaukee, May 16-23, 1 case.

SMALLPOX—FOREIGN.

Brazil: Rio de Janeiro, April 26-May 3, 1 death.
Canada: Winnipeg: May 9-16, 1 case, 1 death.
Canary Islands: Las Palmas, April 25-May 2, 18 cases.
China: Hongkong, March 28-April 11, 2 cases, 1 death.
Colombia: Barranquilla, May 3-10, 3 deaths: Bocas de Toro, May 25, 25 cases, 2 deaths.
Great Britain: Birmingham, May 2-16, 24 cases; Dublin, May 2-9, 27 cases, 4 deaths; Dundee, May 2-9, 1 case; Glasgow, May 8-15, 1 case; Leeds, May 2-16, 34 cases, 3 deaths; Liverpool, to May 16, 6 deaths; London, May 2-9, 17 cases; Manchester, May 2-9, 10 cases, 1 death; Newcastle-on-Tyne, May 2-9, 1 case; Nottingham, May 2-9, 2 cases; Sunderland, May 2-9, 1 case.
India: Bombay, April 21-28, 94 deaths; Calcutta, April 18-25, 3 deaths; Madras, April 18-25, 1 death.
Mexico: City of Mexico, May 10-17, 11 cases, 7 deaths.
Russia: Moscow, April 25-May 2, 2 cases, 1 death.
Spain: Valencia, April 15-30, 2 deaths.

YELLOW FEVER.

Brazil: Rio de Janeiro, April 26-May 3, 13 deaths.
Colombia: Panama, May 11-18, 3 cases, 1 death.
Costa Rica: Limon, April 30-May 14, 5 cases, 2 deaths.
Mexico: Coatzacoalcos, May 8-16, 1 case; Tampico, May 8-16, 1 death; Vera Cruz, May 16-23, 12 cases, 7 deaths.

CHOLERA.

India: Calcutta, April 18-25, 140 deaths.
Straits Settlements: Singapore, April 4-11, 3 deaths.

PLAGUE.

Brazil: Rio de Janeiro, April 26-May 3, 2 deaths.
Chile: Iquique, May 27, present.
China: Hongkong, January 1-April 11, 216 cases, 208 deaths.
India: Bombay, April 21-28, 1,031 cases; Calcutta, April 18-25, 434 cases; Karachi, April 19-26, 228 cases, 197 deaths.
Japan: Yokohama, May 26, present.